# IONOSPHERIC DATA

ISSUED
APRIL 1953

U. S. DEPARTMENT OF COMMERCE
NATIONAL BUREAU OF STANDARDS
CENTRAL RADIO PROPAGATION LABORATORY
WASHINGTON, D. C.

CRPL-F 104 NATIONAL BUREAU OF STANDARDS
CENTRAL RADIO PROPAGATION LABORATORY
WASHINGTON,D.C.
Issued
24 April 1953

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## CONTENTS

# SYMBOLS, TERMINOLOGY, CONVENTIONS

Beginning with data reported for January 1952, the symbols, terminology, and conventions for the determination of median values used in this report (CRPL-F series) conform as far as practicable to those adopted at the Sixth Meeting of the International Radio Consultative Committee (C.C.I.R.) in Geneva, 1951. Excerpts concerning symbols and terminology from Document No. 626-E of this Meeting are given on pages 2-7 of the report CRPL-F89, "Ionospheric Data," issued January 1952. Reprints of these pages are available upon request.

Beginning with data for January 1945, median values are published wherever possible. Where averages are reported, they are, at any hour, the average for all the days during the month for which numerical data exist..

The following conventions are used in determining the medians for hours when no measured values are given because of equipment limitations and ionospheric irregularities. Symbols used are those given in Document No. 626-E referred to above.

a. For all ionospheric characteristics:

Values missing because of A, C, F, L, M, N, Q, S, or T are omitted from the median count.

b. For critical frequencies and virtual heights:

Values of foF2 (and foE near sunrise and sunset) missing because of E are counted as equal to or less than the lower limit of the recorder. Values of h'F2 (and h'E near sunrise and sunset) missing for this reason are counted as equal to or greater than the median. Other characteristics missing because of E are omitted from the median count.

Values missing because of D are counted as equal to or greater than the upper limit of the recorder.

Values missing because of G are counted:

1. For foF2, as equal to or less than foF1.
2. For h'F2, as equal to or greater than the median.

The symbol W is included in the median count only when it replaces a height characteristic. This practice represents a change from that listed in issues previous to CRPL-F78.

Values missing for any other reason are omitted from the median count.

c. For MUF factor (M-factors):

Values missing because of G or W are counted as equal to or less than the median.

Values missing for any other reason are omitted from the median count.

d. For sporadic E (Es):

Values of fEs missing because of E or G (and B when applied to the daytime E region only) are counted as equal to or less than the median foE, or equal to or less than the lower frequency limit of the recorder.

Values of fEs missing for any other reason, and values of h'Es missing for any reason at all are omitted from the median count.

Beginning with data for November 1945, doubtful monthly median values for ionospheric observations at Washington, D. C., are indicated by parentheses, in accordance with the practice already in use for doubtful hourly values. The following are the conventions used to determine whether or not a median value is doubtful:

1. If only four values or less are available, the data are considered insufficient and no median value is computed.

2. For the F2 layer, if only five to nine values are available, the median is considered doubtful. The E and F1 layers are so regular in their characteristics that, as long as there are at least five values, the median is not considered doubtful.

3. For all layers, if more than half of the values used to compute the median are doubtful (either doubtful or interpolated), the median is considered doubtful.

The same conventions are used by the CRPL in computing the medians from tabulations of daily and hourly data for stations other than Washington, beginning with the tables in IRPL-F18.

The tables and graphs of ionospheric data are correct for the values reported to the CRPL, but, because of variations in practice in the interpretation of records and scaling and manner of reporting of values, may at times give an erroneous conception of typical ionospheric characteristics at the station. Some of the errors are due to:

a. Differences in scaling records when spread echoes are present.

b. Omission of values when foF2 is less than or equal to foF1, leading to erroneously high values of monthly averages or median values.

c. Omission of values when critical frequencies are less than the lower frequency limit of the recorder, also leading to erroneously high values of monthly average or median values.

These effects were discussed on pages 6 and 7 of the previous F-series report IRPL-F5.

Ordinarily, a blank space in the fEs column of a table is the result of the fact that a majority of the readings for the month are below the lower limit of the recorder or less than the corresponding values of foE. Blank spaces at the beginning and end of columns of h'F1, foF1, h'E, and foE are usually the result of diurnal variation in these characteristics. Complete absence of medians of h'F1 and foF1 is usually the result of seasonal effects.

The dashed-line prediction curves of the graphs of ionospheric data are obtained from the predicted zero-muf contour charts of the CRPL-D series publications. The following points are worthy of note:

a. Predictions for individual stations used to construct the charts may be more accurate than the values read from the charts since some smoothing of the contours is necessary to allow for the longitude effect within a zone. Thus, inasmuch as the predicted contours are for the center of each zone, part of the discrepancy between the predicted and observed values as given in the F series may be caused by the fact that the station is not centrally located within the zone.

b. The final presentation of the predictions is dependent upon the latest available ionospheric and radio propagation data, as well as upon predicted sunspot number.

c. There is no indication on the graphs of the relative reliability of the data; it is necessary to consult the tables for such information.

The following predicted smoothed 12-month running-average Zürich sunspot numbers were used in constructing the contour charts:

| Month | Predicted Sunspot Number | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 1953 | 1952 | 1951 | 1950 | 1949 | 1948 | 1947 | 1946 | 1945 |
| December | | 33 | 53 | 86 | 108 | 114 | 126 | 85 | 38 |
| November | | 38 | 52 | 87 | 112 | 115 | 124 | 83 | 36 |
| October | | 43 | 52 | 90 | 114 | 116 | 119 | 81 | 23 |
| September | | 46 | 54 | 91 | 115 | 117 | 121 | 79 | 22 |
| August | | 49 | 57 | 96 | 111 | 123 | 122 | 77 | 20 |
| July | | 51 | 60 | 101 | 108 | 125 | 116 | 73 | |
| June | | 52 | 63 | 103 | 108 | 129 | 112 | 67 | |
| May | | 52 | 68 | 102 | 108 | 130 | 109 | 67 | |
| April | | 52 | 74 | 101 | 109 | 133 | 107 | 62 | |
| March | 27 | 52 | 78 | 103 | 111 | 133 | 105 | 51 | |
| February | 29 | 51 | 82 | 103 | 113 | 133 | 90 | 46 | |
| January | 30 | 53 | 85 | 105 | 112 | 130 | 88 | 42 | |

## WORLD-WIDE SOURCES OF IONOSPHERIC DATA

The ionospheric data given here in tables 1 to 69 and figures 1 to 138 were assembled by the Central Radio Propagation Laboratory for analysis and correlation, incidental to CRPL prediction of radio propagation conditions. The data are median values unless otherwise indicated. The following are the sources of the data in this issue:

Commonwealth of Australia, Ionospheric Prediction Service of the Commonwealth Observatory:
- Brisbane, Australia
- Canberra, Australia
- Hobart, Tasmania
- Townsville, Australia

Commonwealth of Australia, Department of External Affairs:
- Macquarie I.

Australian Department of Supply and Shipping, Bureau of Mineral Resources, Geology and Geophysics:
- Watheroo, Western Australia

University of Graz:
Graz, Austria

British Department of Scientific and Industrial Research, Radio Research Board:
Falkland Is.
Inverness, Scotland
Khartoum, Sudan (University College of Khartoum)
Port Lockroy
Singapore, British Malaya
Slough, England

Defence Research Board, Canada:
Baker Lake, Canada
Churchill, Canada
Fort Chimo, Canada
Ottawa, Canada
Prince Rupert, Canada
Resolute Bay, Canada
St. John's, Newfoundland
Winnipeg, Canada

Radio Wave Research Laboratories, National Taiwan University, Taipeh, Formosa, China:
Formosa, China

Danish National Committee of URSI:
Godhavn, Greenland

The Royal Netherlands Meteorological Institute:
De Bilt, Holland

Icelandic Post and Telegraph Administration:
Reykjavik, Iceland

All India Radio (Government of India), New Delhi, India:
Bombay, India
Delhi, India
Madras, India
Tiruchy (Tiruchirapalli), India

Christchurch Geophysical Observatory, New Zealand Department of Scientific and Industrial Research:
Christchurch, New Zealand
Rarotonga, Cook Is.

Norwegian Defence Research Establishment, Kjeller per Lillestrom, Norway:
Oslo, Norway
Tromso, Norway

Manila Observatory:
Baguio, P. I.

South African Council for Scientific and Industrial Research:
Capetown, Union of South Africa
Johannesburg, Union of South Africa

Research Laboratory of Electronics, Chalmers University of Technology, Gothenburg, Sweden:
Kiruna, Sweden

Research Institute of National Defence, Stockholm, Sweden:
Upsala, Sweden

Post, Telephone and Telegraph Administration, Berne, Switzerland:
Schwarzenburg, Switzerland

United States Army Signal Corps:
Adak, Alaska
Okinawa I.
White Sands, New Mexico

National Bureau of Standards (Central Radio Propagation Laboratory):
Baton Rouge, Louisiana (Louisiana State University)
Fairbanks, Alaska
Guam I.
Maui, Hawaii
Narsarssuak, Greenland
Panama Canal Zone
Puerto Rico, W. I.
San Francisco, California (Stanford University)
Washington, D. C.

## HOURLY IONOSPHERIC DATA AT WASHINGTON, D. C.

The data given in tables 70 to 81 follow the scaling practices given in the report IRPL-C61, "Report of International Radio Propagation Conference," pages 36 to 39, and the median values are determined by the conventions given above under "Symbols, Terminology, Conventions." Beginning with September 1949, the data are taken at Ft. Belvoir, Virginia.

## IONOSPHERIC STORMINESS AT WASHINGTON, D.C.

Table 82 presents ionosphere character figures for Washington, D. C., during March 1953, as determined by the criteria given in the report IRPL-R5, "Criteria for Ionospheric Storminess," together with Cheltenham, Maryland, geomagnetic K-figures, which are usually covariant with them.

# RADIO PROPAGATION QUALITY FIGURES

Tables 83a and 83b give for February 1953 the radio propagation quality figures for the North Atlantic area, CRPL advance and short-term forecasts, a summary geomagnetic activity index and sundry comparisons, specifically as follows:

(a) radio propagation quality figures, separately for each 6-hour interval of the Greenwich day, viz., 00-06, 06-12, 12-18, 18-24 hours UT (Universal Time or GCT).
(b) whole-day radio quality indices (beginning October 1952). Each index is a weighted average of the four quarter-day Q-figures, before rounding off, with half weight given to quality grades 5 and 6. This procedure tends to give whole-day indices suitable for comparison with whole-day advance forecasts which designate whenever possible the days when significant disturbance or unusually quiet conditions will occur.
(c) short-term forecasts, issued by CRPL every six hours (nominally one hour before $00^h$, $06^h$, $12^h$, $18^h$ UT) and applicable to the period 1 to 13 (especially 1 to 7) hours ahead. Note that new scoring rules have been adopted beginning with October 1952 data.
(d) advance forecasts, issued semiweekly (CRPL-J reports) and applicable 1 to 3 or 4 days ahead, 4 or 5 to 7 days ahead, and 8 to 25 days ahead. These forecasts are scored against the whole-day quality indices.
(e) half-day averages of the geomagnetic K indices measured by the Cheltenham Magnetic Observatory of the U. S. Coast and Geodetic Survey.
(f) illustration of the comparison of short-term forecasts and Q-figures.
(g) illustration of the outcome of advance forecasts (1 to 3 or 4 days ahead) and for comparison the outcome of a type of "blind" forecast. For the latter the frequency for each quality grade, as determined from the distribution of quality grades in the four most recent months of the current season, is partitioned among the grades observed in the current month in proportion to the frequencies observed in the current month.

The radio propagation quality figures are prepared from radio traffic data reported to CRPL by American Telephone and Telegraph Company, Mackay Radio and Telegraph Company, RCA Communications, Inc., Marconi Company, British Admiralty Signal and Radar Establishment, and the following agencies of the U. S. government:— FCC, Coast Guard, Navy, Army Signal Corps, and State Department. The method of calculation, summarized below, is similar to that described in a 1946 report, IRPL-R31, now out of print. Beginning with recalculated figures for January 1952, only reports of radio transmission on North Atlantic paths closely approximating New York-London are included in the estimation of quality. Observations of selected ionospheric characteristics, even though strongly correlated with radio transmission quality, and traffic reports for paths such as New York-Stockholm or New York-Tangier, previously included in the quality-figure determination with low weight, have been left out of the present calculations inasmuch as a sufficient number of homogeneous reports are now available.

The original reports are submitted on various scales and for various time intervals. The observations for each 6-hour interval are averaged on the quality scale of the original reports. These 6-hour indices are then adjusted to the 1 to 9 quality-figure scale by a conversion table prepared by comparing the distribution of these indices for at least four months, usually a year,

with a master distribution determined from analysis of the reports originally made on the 1 to 9 quality-figure scale. A report whose distribution is the same as the master is thereby coverted linearly to the Q-figure scale. The 6-hourly quality figures are (subjectively) weighted means of the reports received for that period. These 6-hourly quality figures replace, beginning January 1953, the half-daily quality figures which formerly appeared in this table.

These quality figures are, in effect, a consensus of reported radio propagation conditions in the North Atlantic area. The reasons for low quality are not necessarily known and may not be limited to ionospheric storminess. For instance, low quality may result from improper frequency usage for the path and time of day. Although, wherever it is reported, frequency usage is included in the rating of reports, it must often be an assumption that the reports refer to optimum working frequencies. It is more difficult to eliminate from the indices conditions of low quality because of multipath, interference, etc. These considerations should be taken into account in interpreting research correlations between the Q-figures and solar, auroral, geomagnetic or similar indices.

Note. The North Pacific quality figures, which were published through October 1951, have been temporarily discontimued. Since the establishment of the North Pacific Radio Warning Service at Anchorage, Alaska, a larger number of reports are being received than were previously available in Washington. The preparation of the quality figures will be resumed when sufficient data have been accumulated for determination of conversion tables for these new reports.

## OBSERVATIONS OF THE SOLAR CORONA

Tables 84 through 86 give the observations of the solar corona during March 1953, obtained at Climax, Colorado, by the High Altitude Observatory of Harvard University and the University of Colorado. Tables 87 through 89 list the coronal observations obtained at Sacramento Peak, New Mexico, during March 1953, derived by the High Altitude Observatory from spectrograms taken by Harvard University as a part of its performance of an Air Materiel Command Research and Development Contract administered by the Air Force Cambridge Research Laboratories. The data are listed separately for east and west limbs at 5-degree intervals of position angle north and south of the Solar Equator at the limb. The time of observation is given to the nearest tenth of a day, GCT.

Table 84 gives the intensities of the green (5303A) line of the emission spectrum of the solar corona; table 85 gives similarly the intensities of the first red (6374A) coronal line; and table 86, the intensities of the second red (6702A) coronal line; all observed at Climax in March 1953.

Table 87 gives the intensities of the green (5303A) coronal line; table 88, the intensities of the first red (6374A) coronal line; and table 89, the intensities of the second red (6702A) coronal line; all observed at Sacramento Peak in March 1953.

The following symbols are used in tables 84 through 89: a, observation of low weight; -, corona not visible; and X, position angle not included in plate estimates.

## RELATIVE SUNSPOT NUMBERS

Table 90 lists the daily provisional Zürich relative sunspot number, $R_Z$, as communicated by the Swiss Federal Observatory. Table 91 continues the new series of American relative sunspot numbers, $R_{A'}$. Beginning with 1951, the observations collected by the Solar Division, AAVSO, have been reduced according to a new procedure, such that only high quality observations of experienced observers are combined into $R_{A'}$. Observatory coefficients for each of the 28 selected observers were recomputed on data for 1948-1950, years when there was a wide range of solar activity. Otherwise, the procedure is that outlined in Publication of the Astronomical Society of the Pacific, 61, 13, 1949. The scale of the American numbers in 1951 differs from that of the reports for earlier years because of these changes, and the new series is designated $R_{A'}$ rather than $R_A$. The American relative sunspot numbers appear monthly in these pages as communicated by the Solar Division.

## OBSERVATIONS OF SOLAR FLARES

Table 92 gives the preliminary record of solar flares reported to the CRPL. These reports are communicated on a rapid schedule at the sacrifice of detailed accuracy. Definitive and complete records are published later in the Quarterly Bulletin of Solar Activity, I.A.U., in various observatory publications, and elsewhere. The present listing serves to identify and roughly describe the phenomena observed. Details should be sought from the reporting observatory.

Reporting directly to the CRPL are the following observatories: Mt. Wilson, McMath-Hulbert, U. S. Naval, Wendelstein, Kanzel and High Altitude at Sacramento Peak, New Mexico. The remainder report to Meudon (Paris) and the data are taken from the Paris-URSIgram broadcast, monitored fairly regularly by the CRPL. The data on solar flares reported from Sacramento Peak, New Mexico, communicated by the High Altitude Observatory at Boulder, Colorado, are provided by Harvard University as the result of work undertaken on an Air Materiel Command Research and Development Contract administered by the Air Force Cambridge Research Laboratories.

The table lists for each flare the reporting observatory, date, times of beginning and ending of observation, duration (when known), total area (corrected for foreshortening), and heliographic coordinates. For the maximum phase of the flare is given the time, intensity, area relative to the total area, and the importance. The column "SID observed" is to indicate when a sudden ionosphere disturbance, noted elsewhere in these reports, occurred at the time of a flare. Times are in Universal Time (GCT).

## INDICES OF GEOMAGNETIC ACTIVITY

Table 93 lists various indices of geomagnetic activity based on data from magnetic observatories widely distributed throughout the world. The indices are: (1) preliminary international character-figures, C; (2) geomagnetic planetary three-hour-range indices, Kp; (3) magnetically selected quiet and disturbed days.

The C-figure is the arithmetic mean of the subjective classification by all observatories of each day's magnetic activity on a scale of 0 (quiet) to 2 (storm). The magnetically quiet and disturbed days are selected by the international scheme outlined on pages 219-227 in the December 1943 issue of Terrestrial Magnetism and Atmospheric Electricity. The details of the currently used method follow. For each day of a month, its geomagnetic activity is assigned by weighting equally the following four criteria: (1) C; (2) the sum of the eight Kp's; (3) the greatest Kp; and (4) the sums of the squares of the eight Kp's.

Kp is the mean standardized K-index from 11 observatories between geomagnetic latitudes 47 and 63 degrees. The scale is 0 (very quiet) to 9 (extremely disturbed), expressed in thirds of a unit, e.g., 5- is 4 2/3, 5o is 5 0/3, and 5+ is 5 1/3. This planetary index is designed to measure solar particle-radiation by its magnetic effects, specifically to meet the needs of research workers in the ionospheric field. A complete description of Kp has appeared in Bulletin 12b, "Geomagnetic Indices C and K, 1948," published in Washington, D. C., 1949, by the Association of Terrestrial Magnetism and Electricity, International Union of Geodesy and Geophysics. Tables of Kp for 1945-48 are in Bulletin 12b; for 1940-44

and 1949, in these CRPL-F reports, F65-67; for 1950, monthly in F68 and following issues. Current tables are also published quarterly in the Journal of Geophysical Research along with data on sudden commencements (sc) and solar flare effects (sfe).

The Committee on Characterization of Magnetic Disturbance, ATME, IUGG, has kindly supplied this table. The Meteorological Office, De Bilt, Holland, collects the data and compiles C and selected days. The Chairman of the Committee computes the planetary index. At the meeting of ATME held in Brussels in August 1951, it was decided that the computation of Kw would be discontinued after the month of December 1951 since Kp is available from January 1, 1940. Kw, therefore, no longer appears in these reports.

## SUDDEN IONOSPHERE DISTURBANCES

Table 94 shows that no sudden ionosphere disturbances were observed during the month of March 1953 at Washington, D. C.

Table 1

Washington, D. C. (38.7°N, 77.1°W) March 1953

| Time | h'F2 | foF2 | h'F1 | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|
| 00 | (280) | 2.3 | | | | | | 3.0 |
| 01 | (280) | 2.2 | | | | | | 3.0 |
| 02 | (280) | 2.2 | | | | | | 3.0 |
| 03 | 270 | 2.2 | | | | | | 3.0 |
| 04 | 260 | 2.1 | | | | | | 3.0 |
| 05 | (260) | 2.0 | | | | | | 3.1 |
| 06 | 260 | 2.4 | | | | | | 3.2 |
| 07 | 240 | 3.7 | 220 | --- | 110 | 1.9 | | 3.4 |
| 08 | 280 | 4.3 | 220 | 3.4 | 110 | 2.3 | | 3.2 |
| 09 | 340 | 4.5 | 220 | 3.8 | 110 | 2.5 | | 3.1 |
| 10 | 340 | 4.8 | 200 | 3.9 | 110 | 2.8 | | 3.0 |
| 11 | 360 | 5.0 | 200 | 4.0 | 100 | 3.0 | | 3.0 |
| 12 | 320 | 5.2 | 200 | 4.2 | 100 | 3.0 | | 3.1 |
| 13 | 320 | 5.5 | 210 | 4.1 | 100 | 3.0 | | 3.2 |
| 14 | 320 | 5.5 | 210 | 4.0 | 110 | 3.0 | | 3.2 |
| 15 | 300 | 5.6 | 220 | 4.0 | 110 | 2.8 | | 3.2 |
| 16 | 300 | 5.2 | 220 | 3.7 | 110 | 2.5 | | 3.2 |
| 17 | 260 | 5.2 | 230 | 3.2 | 110 | 2.1 | | 3.3 |
| 18 | 240 | 4.9 | 230 | --- | 120 | 1.7 | | 3.3 |
| 19 | 230 | 4.4 | | | | | | 3.2 |
| 20 | 240 | 3.7 | | | | | | 3.1 |
| 21 | 250 | 3.2 | | | | | | 3.0 |
| 22 | (250) | 3.0 | | | | | | 3.0 |
| 23 | (270) | 2.8 | | | | | | 3.0 |

Time: 75.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 15 seconds.

Table 2

Tromso, Norway (69.7°N, 19.0°E) February 1953

| Time | h'F2 | foF2 | h'F1 | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|
| 00 | --- | --- | | | | | 3.8 | --- |
| 01 | --- | (2.5) | | | | | 3.8 | (2.9) |
| 02 | (325) | (1.8) | | | | | 3.2 | (3.0) |
| 03 | 325 | 1.8 | | | | | 3.1 | 2.9 |
| 04 | 300 | 1.8 | | | | | 3.1 | 3.0 |
| 05 | 310 | 1.8 | | | | | 3.0 | 3.0 |
| 06 | 280 | 1.8 | | | | | 2.7 | 3.0 |
| 07 | 260 | 2.0 | | | | | 2.0 | 3.1 |
| 08 | 240 | 2.9 | | | --- | --- | 2.1 | 3.2 |
| 09 | 235 | 3.6 | --- | --- | --- | --- | 1.7 | 3.4 |
| 10 | 235 | 4.2 | 230 | --- | 150 | 1.8 | | 3.5 |
| 11 | 230 | 4.5 | 230 | --- | --- | 1.8 | | 3.5 |
| 12 | 225 | 4.6 | 225 | --- | --- | 1.9 | | 3.5 |
| 13 | 230 | 4.8 | 230 | --- | 150 | 1.8 | | 3.4 |
| 14 | 230 | 4.7 | --- | --- | 140 | 1.7 | 2.0 | 3.4 |
| 15 | 230 | 4.0 | | | 150 | 1.6 | 1.6 | 3.4 |
| 16 | 230 | 3.4 | | | --- | --- | 1.7 | 3.4 |
| 17 | 240 | 2.8 | | | | | 3.0 | 3.2 |
| 18 | (245) | (2.7) | | | | | 3.2 | (3.2) |
| 19 | (280) | (2.4) | | | | | 4.0 | (3.1) |
| 20 | --- | --- | | | | | 4.0 | --- |
| 21 | --- | --- | | | | | 4.1 | --- |
| 22 | --- | --- | | | | | 3.9 | --- |
| 23 | | | | | | | 3.8 | --- |

Time: 15.0°E.
Sweep: 0.6 Mc to 25.0 Mc in 5 minutes, automatic operation.

Table 3

Kiruna, Sweden (67.8°N, 20.5°E) February 1953

| Time | h'F2 | foF2 | h'F1 | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|
| 00 | --- | --- | | | | | 3.2 | --- |
| 01 | (310) | (3.0) | | | | | (2.1) | (2.9) |
| 02 | (300) | (2.4) | | | | | | (2.9) |
| 03 | --- | --- | | | | | (1.3) | --- |
| 04 | --- | --- | | | | | (2.1) | --- |
| 05 | (320) | (2.6) | | | | | | (3.0) |
| 06 | --- | (2.2) | | | | | | (3.1) |
| 07 | (300) | (2.3) | | | | | | (3.1) |
| 08 | (230) | (3.2) | | | | | | 3.3 |
| 09 | 230 | (4.0) | --- | --- | --- | --- | | 3.6 |
| 10 | 240 | 4.1 | --- | --- | --- | --- | | 3.5 |
| 11 | 230 | 5.0 | --- | --- | --- | --- | | 3.6 |
| 12 | 235 | 4.9 | --- | --- | --- | --- | | 3.6 |
| 13 | 230 | 5.2 | --- | --- | --- | --- | | 3.5 |
| 14 | 230 | 4.9 | --- | --- | --- | --- | | 3.6 |
| 15 | 220 | 4.3 | --- | --- | --- | --- | | 3.5 |
| 16 | 220 | 4.0 | | | --- | --- | | 3.4 |
| 17 | 240 | 3.5 | | | | | | 3.3 |
| 18 | 260 | 3.1 | | | | | | 3.3 |
| 19 | --- | (3.0) | | | | | 2.6 | (3.2) |
| 20 | (310) | (3.0) | | | | | 4.1 | (3.1) |
| 21 | --- | --- | | | | | 2.8 | --- |
| 22 | --- | --- | | | | | 4.0 | --- |
| 23 | --- | --- | | | | | 3.8 | --- |

Time: 15.0°E.
Sweep: 0.8 Mc to 15.0 Mc in 30 seconds.

Table 4

Fairbanks, Alaska (64.9°N, 147.8°W) February 1953

| Time | h'F2 | foF2 | h'F1 | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|
| 00 | --- | --- | | | | | 5.0 | --- |
| 01 | --- | --- | | | | | 5.0 | --- |
| 02 | --- | --- | | | | | 5.6 | --- |
| 03 | --- | --- | | | | | 5.6 | --- |
| 04 | --- | --- | | | | | 5.2 | --- |
| 05 | (300) | (2.4) | | | | | 5.4 | (3.0) |
| 06 | --- | (2.0) | | | | | 5.1 | --- |
| 07 | (300) | (2.5) | | | --- | --- | | --- |
| 08 | <260 | (3.0) | | | --- | --- | | (3.4) |
| 09 | 240 | 3.7 | --- | --- | --- | --- | | 3.4 |
| 10 | 230 | 4.2 | --- | --- | --- | --- | | 3.4 |
| 11 | 230 | 4.6 | 220 | --- | --- | --- | | 3.4 |
| 12 | 220 | 5.3 | 220 | (3.1) | --- | --- | | 3.4 |
| 13 | 220 | 5.2 | 220 | --- | --- | --- | | 3.4 |
| 14 | 220 | 5.2 | --- | --- | --- | --- | | 3.4 |
| 15 | 220 | 5.1 | | | --- | --- | | 3.5 |
| 16 | 220 | 4.5 | | | | | | 3.4 |
| 17 | 220 | 4.2 | | | | | | 3.4 |
| 18 | 240 | 3.3 | | | | | | 3.3 |
| 19 | 240 | (2.4) | | | | | | (3.3) |
| 20 | --- | --- | | | | | 4.1 | --- |
| 21 | --- | --- | | | | | 4.8 | --- |
| 22 | --- | --- | | | | | 6.3 | --- |
| 23 | --- | --- | | | | | 5.4 | --- |

Time: 150.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 15 seconds.

Table 5

Narsarssuak, Greenland (61.2°N, 45.4°W) February 1953

| Time | h'F2 | foF2 | h'F1 | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|
| 00 | --- | (2.7) | | | | | 4.8 | --- |
| 01 | --- | --- | | | | | 4.8 | --- |
| 02 | --- | --- | | | | | 4.7 | --- |
| 03 | --- | --- | | | | | 4.7 | --- |
| 04 | --- | --- | | | | | 4.5 | --- |
| 05 | --- | --- | | | | | 4.1 | --- |
| 06 | --- | --- | | | | | 4.0 | --- |
| 07 | --- | (2.0) | | | | | 3.7 | --- |
| 08 | 240 | 3.2 | | | | | | 3.4 |
| 09 | 230 | 3.8 | --- | --- | --- | --- | | 3.5 |
| 10 | 240 | 4.2 | 210 | --- | --- | --- | | 3.5 |
| 11 | 260 | (4.6) | 220 | (3.4) | --- | --- | | 3.5 |
| 12 | 270 | (4.8) | (220) | 3.4 | 110 | 2.8 | | 3.4 |
| 13 | 270 | 4.8 | 220 | 3.4 | 110 | --- | | 3.3 |
| 14 | 250 | (5.0) | 220 | 3.3 | (110) | (2.3) | | 3.4 |
| 15 | 240 | (4.7) | (230) | 3.2 | --- | --- | | (3.4) |
| 16 | 240 | (4.2) | --- | --- | --- | --- | 2.6 | (3.3) |
| 17 | 250 | (3.8) | --- | --- | --- | --- | 3.2 | (3.2) |
| 18 | 260 | (3.4) | | | | | 4.2 | (3.3) |
| 19 | 300 | (3.2) | | | | | 4.1 | (2.9) |
| 20 | --- | (3.0) | | | | | 4.5 | --- |
| 21 | --- | (3.2) | | | | | 6.2 | (3.2) |
| 22 | --- | (3.0) | | | | | 6.8 | (3.0) |
| 23 | --- | --- | | | | | 5.8 | --- |

Time: 45.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 30 seconds.

Table 6

Oslo, Norway (60.0°N, 11.1°E) February 1953

| Time | h'F2 | foF2 | h'F1 | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|
| 00 | (300) | 1.8 | | | | | | 2.9 |
| 01 | 310 | 1.6 | | | | | 2.2 | 2.9 |
| 02 | 290 | 1.6 | | | | | 2.3 | 2.9 |
| 03 | 300 | 1.6 | | | | | 2.0 | 2.9 |
| 04 | 300 | 1.4 | | | | | 1.9 | 2.9 |
| 05 | 310 | 1.4 | | | | | 1.0 | 3.0 |
| 06 | 290 | 1.4 | | | | | 1.4 | (3.0) |
| 07 | (285) | 1.8 | | | | | | 3.1 |
| 08 | 235 | 3.1 | 255 | --- | 135 | 1.6 | 2.0 | 3.4 |
| 09 | 225 | 4.2 | 225 | --- | 130 | 1.8 | 2.9 | 3.6 |
| 10 | 230 | 4.8 | 215 | --- | 125 | 2.1 | 3.0 | 3.6 |
| 11 | 240 | 4.8 | 215 | --- | 120 | 2.2 | 2.9 | 3.6 |
| 12 | 240 | 4.8 | 215 | 3.5 | 120 | 2.4 | 3.0 | 3.5 |
| 13 | 240 | 5.0 | 215 | 3.4 | 120 | 2.3 | 3.0 | 3.6 |
| 14 | 235 | 5.1 | 225 | --- | 125 | 2.2 | 3.0 | 3.5 |
| 15 | 230 | 5.1 | 230 | --- | 125 | 2.0 | 2.8 | 3.6 |
| 16 | 220 | 4.8 | 235 | --- | 135 | 1.8 | 2.4 | 3.5 |
| 17 | 225 | 4.2 | 240 | --- | 145 | 1.6 | | 3.4 |
| 18 | 235 | 4.0 | | | --- | --- | | 3.3 |
| 19 | 240 | 3.4 | | | | | | 3.2 |
| 20 | 250 | 2.6 | | | | | | 3.2 |
| 21 | (270) | 1.8 | | | | | | 3.1 |
| 22 | (290) | 1.8 | | | | | | (3.0) |
| 23 | --- | 1.6 | | | | | | (3.0) |

Time: 15.0°E.
Sweep: 0.6 Mc to 14.0 Mc in 8 minutes, automatic operation.

Table 7

Upsala, Sweden (59.8°N, 17.6°E) February 1953

| Time | h'F2 | foF2 | h'F1 | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|
| 00 | 330 | 2.0 | | | | | | 2.9 |
| 01 | 330 | 2.0 | | | | | | 2.8 |
| 02 | 310 | 2.0 | | | | | 2.4 | 2.9 |
| 03 | 315 | 2.0 | | | | | | 2.9 |
| 04 | 340 | 1.8 | | | | | | 2.8 |
| 05 | 310 | 1.6 | | | | | 2.0 | (3.0) |
| 06 | 320 | 1.6 | | | | | | (2.9) |
| 07 | 260 | 2.3 | | | --- | E | | 3.0 |
| 08 | 225 | 3.7 | 225 | (2.4) | 125 | 1.5 | 2.3 | 3.5 |
| 09 | 225 | 4.5 | 220 | 2.8 | 120 | 1.8 | | 3.5 |
| 10 | 225 | 5.0 | 220 | 3.2 | 115 | 2.1 | | 3.5 |
| 11 | 225 | 5.1 | 215 | 3.3 | 115 | 2.2 | | 3.5 |
| 12 | 230 | 5.2 | 210 | 3.3 | 115 | 2.3 | | 3.5 |
| 13 | 235 | 5.2 | 220 | 3.2 | 120 | 2.2 | | 3.5 |
| 14 | 230 | 5.3 | 220 | 3.1 | 120 | 2.1 | | 3.5 |
| 15 | 225 | 5.1 | 230 | 2.8 | 125 | 1.9 | | 3.5 |
| 16 | 220 | 4.6 | 230 | --- | 135 | 1.6 | | 3.5 |
| 17 | 220 | 4.0 | | | --- | --- | | 3.4 |
| 18 | 230 | 3.7 | | | | | | 3.2 |
| 19 | 235 | 3.1 | | | | | | 3.2 |
| 20 | 250 | 2.3 | | | | | | 3.2 |
| 21 | 280 | 1.9 | | | | | | 3.0 |
| 22 | 300 | 1.8 | | | | | | 3.0 |
| 23 | 300 | 1.8 | | | | | | (2.9) |

Time: 15.0°E.
Sweep: 1.4 Mc to 17.0 Mc in 6 minutes, automatic operation.

Table 8

Adak, Alaska (51.9°N, 176.6°W) February 1953

| Time | h'F2 | foF2 | h'F1 | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|
| 00 | 250 | 2.7 | | | | | | 3.2 |
| 01 | 250 | 2.8 | | | | | | 3.1 |
| 02 | (250) | 2.8 | | | | | | 3.1 |
| 03 | 250 | 2.7 | | | | | | 3.1 |
| 04 | 260 | 2.7 | | | | | | 3.1 |
| 05 | <250 | 2.7 | | | | | | 3.1 |
| 06 | 230 | 2.8 | | | | | | 3.2 |
| 07 | 210 | 3.6 | --- | --- | --- | E | | 3.6 |
| 08 | 210 | 4.8 | 210 | --- | 120 | 1.9 | | 3.7 |
| 09 | 220 | 5.2 | 200 | 3.3 | 110 | 2.2 | | 3.6 |
| 10 | 230 | 5.6 | 210 | 3.6 | 110 | 2.4 | | 3.6 |
| 11 | 240 | 6.0 | 210 | 3.8 | 110 | 2.5 | | 3.6 |
| 12 | 230 | 6.0 | 210 | 3.8 | 110 | 2.6 | | 3.5 |
| 13 | 240 | 6.1 | 210 | 3.7 | 110 | (2.5) | | 3.5 |
| 14 | 230 | 6.2 | 210 | --- | 110 | 2.3 | | 3.6 |
| 15 | 220 | 5.8 | 210 | --- | 110 | 2.2 | | 3.6 |
| 16 | 210 | 5.2 | --- | --- | 120 | 1.9 | | 3.6 |
| 17 | 200 | 4.6 | | | | | | 3.6 |
| 18 | 210 | 3.5 | | | | | | 3.6 |
| 19 | 210 | 2.8 | | | | | | 3.5 |
| 20 | <220 | 2.2 | | | | | | 3.4 |
| 21 | 240 | 2.4 | | | | | | (3.2) |
| 22 | 250 | 2.6 | | | | | | 3.0 |
| 23 | 250 | 2.6 | | | | | | 3.1 |

Time: 180.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 30 seconds.

Table 9

Graz, Austria (47.1°N, 15.5°E) February 1953

| Time | h'F2 | foF2 | h'F1 | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|
| 00 | 290 | 3.1 | | | | | | |
| 01 | 280 | 3.1 | | | | | | |
| 02 | 290 | 3.1 | | | | | | |
| 03 | 300 | 3.1 | | | | | | |
| 04 | 290 | 2.9 | | | | | | |
| 05 | 270 | 2.4 | | | | | | |
| 06 | 250 | 2.4 | | | | | | |
| 07 | 230 | 3.4 | | | | | | |
| 08 | 200 | 4.8 | | | | | | |
| 09 | 200 | 5.3 | 200 | 3.4 | | | | |
| 10 | 220 | 5.4 | 200 | 3.6 | | | | |
| 11 | 230 | 6.0 | 200 | 3.7 | | | | |
| 12 | 240 | 6.0 | 200 | 3.8 | | | | |
| 13 | 240 | 5.8 | 200 | 3.8 | | | | |
| 14 | 230 | 5.4 | 200 | 3.6 | | | | |
| 15 | 220 | 5.8 | 200 | 3.3 | | | | |
| 16 | 210 | 5.2 | 200 | 3.3 | | | | |
| 17 | 200 | 5.0 | | | | | | |
| 18 | 220 | 3.9 | | | | | | |
| 19 | 250 | 3.9 | | | | | | |
| 20 | 250 | 3.5 | | | | | | |
| 21 | 250 | 3.2 | | | | | | |
| 22 | 280 | 3.3 | | | | | | |
| 23 | 270 | 3.1 | | | | | | |

Time: 15.0°E.
Sweep: 2.5 Mc to 12.0 Mc in 2 minutes.

Table 10

San Francisco, California (37.4°N, 122.2°W) February 1953

| Time | h'F2 | foF2 | h'F1 | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|
| 00 | (250) | (3.1) | | | | | | (3.2) |
| 01 | (230) | (3.0) | | | | | | (3.3) |
| 02 | (230) | (2.8) | | | | | | (3.3) |
| 03 | (240) | (2.9) | | | | | | (3.2) |
| 04 | (240) | (3.0) | | | | | | (3.3) |
| 05 | (250) | (2.9) | | | | | | (3.2) |
| 06 | (250) | (2.9) | | | | | | (3.2) |
| 07 | 230 | (3.8) | | | | | | (3.4) |
| 08 | 220 | (5.4) | 210 | --- | 110 | 2.0 | 2.3 | (3.6) |
| 09 | 230 | 6.0 | 210 | (3.8) | 110 | (2.5) | 2.2 | 3.6 |
| 10 | 250 | 6.2 | 200 | (4.0) | (110) | (2.7) | 2.4 | 3.5 |
| 11 | 260 | 6.3 | 200 | (4.1) | 110 | 3.0 | 3.4 | 3.4 |
| 12 | 260 | 6.9 | 200 | 4.2 | 110 | (3.0) | 2.6 | 3.4 |
| 13 | 260 | 6.8 | 200 | (4.1) | (110) | (3.0) | 3.0 | 3.4 |
| 14 | 260 | 6.4 | 210 | (4.0) | 110 | (3.0) | 2.4 | 3.5 |
| 15 | 240 | 5.9 | 210 | (3.9) | 110 | (2.8) | 2.0 | 3.5 |
| 16 | 230 | 5.7 | 220 | --- | 110 | (2.4) | 2.7 | 3.6 |
| 17 | 220 | 5.2 | 200 | --- | (120) | 1.9 | 2.7 | 3.6 |
| 18 | 200 | (4.2) | | | | | 2.5 | (3.5) |
| 19 | (210) | (3.1) | | | | | | (3.4) |
| 20 | (220) | 2.8 | | | | | | 3.4 |
| 21 | (230) | (2.7) | | | | | | (3.4) |
| 22 | (240) | (2.7) | | | | | | 3.2 |
| 23 | (240) | (3.0) | | | | | | (3.2) |

Time: 120.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 15 seconds.

Table 11

White Sands, New Mexico (32.3°N, 106.5°W) February 1953

| Time | h'F2 | foF2 | h'F1 | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|
| 00 | 250 | 3.2 | | | | | | 3.2 |
| 01 | 250 | 3.3 | | | | | | 3.2 |
| 02 | 250 | 3.1 | | | | | | 3.2 |
| 03 | 240 | 3.2 | | | | | | 3.2 |
| 04 | 230 | 3.2 | | | | | | 3.3 |
| 05 | 230 | 3.0 | | | | | | 3.3 |
| 06 | 240 | 2.8 | | | | | | 3.2 |
| 07 | 220 | 4.2 | --- | --- | --- | --- | | 3.5 |
| 08 | 220 | 5.6 | 210 | --- | 110 | 2.2 | 1.8 | 3.6 |
| 09 | 240 | 5.9 | 220 | --- | 100 | 2.6 | 2.3 | 3.6 |
| 10 | 260 | 6.1 | 200 | 4.2 | 100 | 2.9 | 2.6 | 3.5 |
| 11 | 260 | 6.6 | 200 | 4.3 | 100 | 3.0 | 2.7 | 3.3 |
| 12 | 270 | 6.8 | 200 | 4.3 | 100 | 3.1 | 3.2 | 3.3 |
| 13 | 260 | 7.0 | 200 | 4.3 | 100 | 3.1 | 2.8 | 3.4 |
| 14 | 260 | 7.0 | 210 | 4.1 | 100 | 3.0 | 2.6 | 3.4 |
| 15 | 250 | 6.2 | 200 | 4.0 | 100 | 2.8 | 2.2 | 3.5 |
| 16 | 230 | 5.8 | 220 | --- | 100 | 2.6 | 2.8 | 3.6 |
| 17 | 220 | 5.4 | 210 | --- | 100 | 2.0 | 3.1 | 3.6 |
| 18 | 200 | 4.6 | | | | | 2.6 | 3.6 |
| 19 | 210 | 3.3 | | | | | 2.2 | 3.6 |
| 20 | 230 | 3.0 | | | | | | 3.4 |
| 21 | 240 | 2.8 | | | | | | 3.3 |
| 22 | 240 | 3.0 | | | | | | 3.2 |
| 23 | 250 | 3.2 | | | | | | 3.2 |

Time: 105.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 30 seconds.

Table 12

Baton Rouge, Louisiana (30.5°N, 91.2°W) February 1953

| Time | h'F2 | foF2 | h'F1 | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|
| 00 | 260 | 3.2 | | | | | | 3.2 |
| 01 | 260 | 3.3 | | | | | | 3.1 |
| 02 | 260 | 3.4 | | | | | | 3.2 |
| 03 | 250 | 3.3 | | | | | | 3.2 |
| 04 | 250 | 3.4 | | | | | | 3.3 |
| 05 | 250 | 3.1 | | | | | | 3.2 |
| 06 | 260 | 3.0 | | | | | | 3.3 |
| 07 | 230 | 4.3 | | | | | | 3.6 |
| 08 | 240 | 5.8 | 230 | --- | 120 | 2.1 | 3.4 | 3.6 |
| 09 | 250 | 6.2 | 220 | --- | 110 | 2.6 | 4.7 | 3.6 |
| 10 | 260 | 6.1 | 220 | 4.0 | 110 | 2.9 | 4.2 | 3.5 |
| 11 | 280 | 6.1 | 220 | 4.2 | 110 | 3.0 | 4.8 | 3.4 |
| 12 | 300 | 6.8 | 200 | 4.2 | 110 | 3.1 | 4.4 | 3.2 |
| 13 | 280 | 7.1 | 210 | 4.2 | 110 | 3.1 | 4.3 | 3.4 |
| 14 | 270 | 6.8 | 220 | 4.1 | 110 | 3.0 | 3.8 | 3.4 |
| 15 | 260 | 6.3 | 220 | 4.0 | 110 | 2.9 | 4.0 | 3.4 |
| 16 | 250 | 6.0 | 230 | --- | 120 | 2.4 | 3.9 | 3.5 |
| 17 | 230 | 5.6 | --- | --- | 120 | 2.0 | 3.0 | 3.6 |
| 18 | 220 | 4.8 | | | | | 2.3 | 3.6 |
| 19 | 230 | 3.9 | | | | | 2.0 | 3.6 |
| 20 | 240 | 3.1 | | | | | | 3.4 |
| 21 | 250 | 3.0 | | | | | | 3.3 |
| 22 | 270 | 3.0 | | | | | | 3.1 |
| 23 | 270 | 3.2 | | | | | | 3.1 |

Time: 90.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 30 seconds.

Table 13

Okinawa I. (26.3°N, 127.8°E) February 1953

| Time | h'F2 | foF2 | h'F1 | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|
| 00 | 280 | 3.0 | | | | | | 2.9 |
| 01 | 280 | 3.1 | | | | | | 3.0 |
| 02 | 270 | 3.0 | | | | | 1.8 | 3.1 |
| 03 | 250 | 3.2 | | | | | | 3.3 |
| 04 | 230 | 2.5 | | | | | 1.8 | 3.4 |
| 05 | 270 | 2.3 | | | | | | 3.1 |
| 06 | 290 | 2.1 | | | | | | 3.0 |
| 07 | 240 | 4.4 | --- | --- | --- | --- | | 3.4 |
| 08 | 250 | 5.6 | 230 | --- | 120 | 2.2 | | 3.4 |
| 09 | 270 | 6.4 | 240 | --- | 120 | 2.6 | | 3.4 |
| 10 | 290 | 7.8 | 230 | (4.2) | 120 | 2.9 | | 3.2 |
| 11 | 290 | 8.6 | 230 | 4.3 | 120 | 3.0 | 3.4 | 3.2 |
| 12 | 290 | 9.2 | 220 | 4.4 | 120 | 3.1 | | 3.1 |
| 13 | 300 | 10.2 | 210 | 4.4 | 120 | 3.1 | 3.5 | 3.1 |
| 14 | 280 | 11.0 | 230 | 4.2 | 120 | 3.0 | 3.6 | 3.2 |
| 15 | 260 | 10.2 | 230 | (4.0) | 120 | 2.8 | 3.5 | 3.3 |
| 16 | 260 | 7.6 | 230 | --- | 120 | 2.5 | 2.8 | 3.4 |
| 17 | 240 | 6.8 | 240 | --- | 120 | 2.0 | 2.8 | 3.5 |
| 18 | 220 | 5.8 | | | | | 2.2 | 3.5 |
| 19 | 230 | 4.3 | | | | | | 3.3 |
| 20 | 235 | 3.8 | | | | | 1.8 | 3.2 |
| 21 | 260 | 3.5 | | | | | 1.9 | 3.1 |
| 22 | 265 | 3.2 | | | | | 1.8 | 3.0 |
| 23 | 280 | 2.9 | | | | | | 3.0 |

Time: 127.5°E.
Sweep: 1.0 Mc to 25.0 Mc in 15 seconds.

Table 14

Maui, Hawaii (20.8°N, 156.5°W) February 1953

| Time | h'F2 | foF2 | h'F1 | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|
| 00 | 270 | 2.9 | | | | | | 3.0 |
| 01 | 270 | 2.9 | | | | | | 3.0 |
| 02 | 240 | 3.2 | | | | | | 3.2 |
| 03 | 220 | 3.2 | | | | | 1.4 | 3.5 |
| 04 | <220 | 2.3 | | | | | 1.5 | 3.6 |
| 05 | <240 | 2.0 | | | | | | 3.2 |
| 06 | <280 | 1.8 | | | | | 1.6 | 3.0 |
| 07 | 250 | 3.6 | --- | --- | 120 | 1.4 | | 3.2 |
| 08 | 250 | 5.4 | 230 | --- | 110 | 2.2 | | 3.4 |
| 09 | 290 | 6.6 | 230 | --- | 110 | 2.7 | | 3.2 |
| 10 | 300 | 7.8 | 220 | 4.4 | 110 | 3.0 | 3.8 | 3.0 |
| 11 | 290 | 9.8 | 220 | 4.5 | 110 | 3.2 | 4.1 | 3.2 |
| 12 | 270 | 10.2 | 210 | 4.5 | 110 | 3.3 | 4.0 | 3.2 |
| 13 | 290 | 10.1 | 200 | 4.6 | 110 | 3.3 | 4.4 | 3.1 |
| 14 | 280 | 10.6 | 210 | 4.5 | 110 | 3.2 | 4.1 | 3.1 |
| 15 | 270 | 10.2 | 220 | 4.4 | 110 | 3.0 | 4.4 | 3.3 |
| 16 | 250 | 9.0 | 230 | 4.1 | 110 | 2.8 | 3.8 | 3.4 |
| 17 | 240 | 7.2 | 230 | --- | 110 | 2.4 | 3.5 | 3.5 |
| 18 | 220 | 5.8 | | | 120 | 1.6 | 3.2 | 3.7 |
| 19 | 210 | 3.9 | | | | | 2.5 | 3.6 |
| 20 | 220 | 3.1 | | | | | 2.4 | 3.3 |
| 21 | 260 | 3.0 | | | | | 1.8 | 3.1 |
| 22 | 250 | 3.1 | | | | | 1.6 | 3.2 |
| 23 | 240 | 2.9 | | | | | | 3.2 |

Time: 150.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 15 seconds.

Table 15

Puerto Rico, W.I. (18.5°N, 67.2°W) February 1953

| Time | h'F2 | foF2 | h'F1 | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|
| 00 | 260 | 3.5 | | | | | | 3.1 |
| 01 | 260 | 3.6 | | | | | | 3.2 |
| 02 | 250 | 3.8 | | | | | | 3.2 |
| 03 | 230 | 4.1 | | | | | | 3.4 |
| 04 | 220 | 3.8 | | | | | | 3.4 |
| 05 | 220 | 3.4 | | | | | | 3.5 |
| 06 | 230 | 3.0 | | | --- | --- | | 3.3 |
| 07 | 220 | 3.9 | --- | --- | 100 | --- | | 3.6 |
| 08 | 220 | 5.5 | 210 | --- | 100 | 2.2 | | 3.7 |
| 09 | 240 | 6.0 | 210 | --- | 100 | 2.7 | | 3.6 |
| 10 | 260 | 6.4 | 220 | 4.3 | 100 | 3.0 | | 3.5 |
| 11 | 260 | 7.2 | 220 | 4.4 | 100 | 3.2 | | 3.5 |
| 12 | 270 | 7.0 | 210 | 4.5 | 100 | 3.3 | | 3.4 |
| 13 | 270 | 6.9 | 210 | 4.5 | 100 | 3.3 | | 3.4 |
| 14 | 270 | 6.9 | 210 | 4.4 | 100 | 3.2 | | 3.4 |
| 15 | 270 | 7.0 | 210 | 4.3 | 100 | 3.1 | | 3.4 |
| 16 | 260 | 6.8 | 220 | 4.1 | 100 | 2.9 | | 3.4 |
| 17 | 240 | 6.6 | 220 | --- | 100 | 2.4 | | 3.5 |
| 18 | 220 | 6.6 | 220 | --- | 110 | --- | 3.0 | 3.6 |
| 19 | 200 | 5.6 | | | | | 2.2 | 3.7 |
| 20 | 200 | 4.2 | | | | | | 3.6 |
| 21 | 240 | 2.9 | | | | | | 3.3 |
| 22 | 270 | 3.3 | | | | | | 3.1 |
| 23 | 270 | 3.6 | | | | | | 3.1 |

Time: 60.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 15 seconds.

Table 16

Guam I. (13.6°N, 144.9°E) February 1953

| Time | h'F2 | foF2 | h'F1 | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|
| 00 | 230 | 4.8 | | | | | | 3.3 |
| 01 | 230 | 4.4 | | | | | | 3.4 |
| 02 | 240 | 4.2 | | | | | | 3.4 |
| 03 | 330 | 3.2 | | | | | | 3.4 |
| 04 | 250 | 2.5 | | | | | | 3.3 |
| 05 | 270 | 2.1 | | | | | | 3.3 |
| 06 | 270 | 1.8 | | | | | 1.6 | 3.3 |
| 07 | 250 | 4.4 | | | 130 | 1.7 | | 3.4 |
| 08 | 270 | 6.2 | 230 | --- | 120 | 2.4 | 3.0 | 3.3 |
| 09 | 290 | 7.6 | 220 | 4.1 | 110 | 2.8 | 4.0 | 3.1 |
| 10 | 320 | 8.3 | 200 | 4.3 | 110 | 3.0 | 4.2 | 2.8 |
| 11 | 340 | 8.4 | 200 | 4.4 | 110 | 3.2 | 4.1 | 2.5 |
| 12 | 350 | 8.0 | 200 | 4.4 | 110 | 3.3 | 4.0 | 2.5 |
| 13 | 340 | 7.6 | 190 | 4.4 | 110 | 3.3 | | 2.6 |
| 14 | 340 | 8.0 | 200 | 4.4 | 110 | 3.2 | | 2.6 |
| 15 | 320 | 8.6 | 200 | 4.3 | 110 | 3.0 | 3.8 | 2.8 |
| 16 | 300 | 9.0 | 220 | 4.1 | 110 | 2.8 | 3.4 | 3.0 |
| 17 | 270 | 9.2 | 230 | 3.6 | 120 | 2.4 | | 3.2 |
| 18 | 250 | 9.0 | | | --- | --- | 2.8 | 3.4 |
| 19 | 230 | 8.6 | | | | | | 3.3 |
| 20 | 220 | 7.8 | | | | | | 3.3 |
| 21 | 220 | 7.0 | | | | | 2.2 | 3.3 |
| 22 | 230 | 6.1 | | | | | 2.2 | 3.3 |
| 23 | 240 | 5.3 | | | | | | 3.3 |

Time: 150.0°E.
Sweep: 1.0 Mc to 25.0 Mc in 15 seconds.

Table 17

Panama Canal Zone (9.4°N, 79.9°W) February 1953

| Time | h'F2 | foF2 | h'F1 | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|
| 00 | 260 | 3.1 | | | | | 1.7 | 3.0 |
| 01 | 240 | 3.1 | | | | | 1.7 | 3.1 |
| 02 | 230 | 3.3 | | | | | 1.8 | 3.3 |
| 03 | 230 | 3.0 | | | | | 2.4 | 3.4 |
| 04 | 220 | 2.5 | | | | | 2.7 | 3.3 |
| 05 | 260 | 2.2 | | | | | 2.4 | 2.9 |
| 06 | 270 | 2.6 | | | | | 2.2 | 2.9 |
| 07 | 240 | 4.5 | | | 120 | --- | 2.2 | 3.4 |
| 08 | 260 | 5.8 | 230 | --- | 110 | 2.4 | | 3.4 |
| 09 | 280 | 6.6 | 220 | 4.2 | 110 | 2.9 | | 3.2 |
| 10 | 300 | 7.4 | 220 | 4.4 | 110 | 3.1 | | 3.1 |
| 11 | 320 | 7.8 | 220 | 4.6 | 110 | 3.3 | | 2.9 |
| 12 | 320 | 8.8 | 210 | 4.5 | 110 | 3.4 | 3.6 | 3.0 |
| 13 | 300 | 8.9 | 210 | 4.6 | 110 | 3.4 | 3.6 | 2.9 |
| 14 | 310 | 8.9 | 200 | 4.6 | 110 | 3.3 | 3.5 | 2.9 |
| 15 | 310 | 9.4 | <230 | 4.4 | 110 | 3.2 | 4.2 | 2.9 |
| 16 | 280 | 10.1 | 240 | 4.3 | 110 | 2.9 | 4.2 | 3.1 |
| 17 | 250 | 9.8 | --- | --- | 110 | 2.5 | 4.3 | 3.3 |
| 18 | 220 | 7.8 | | | --- | --- | 4.2 | 3.5 |
| 19 | 220 | 4.9 | | | | | 3.4 | 3.4 |
| 20 | 220 | 3.6 | | | | | 3.2 | 3.3 |
| 21 | (250) | 3.0 | | | | | 2.4 | 3.1 |
| 22 | (280) | 2.8 | | | | | | 2.8 |
| 23 | 290 | 2.9 | | | | | | 2.9 |

Time: 75.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 15 seconds.

Table 18

Fairbanks, Alaska (64.9°N, 147.8°W) January 1953

| Time | h'F2 | foF2 | h'F1 | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|
| 00 | --- | --- | | | | | 6.4 | --- |
| 01 | (270) | (2.8) | | | | | 5.8 | --- |
| 02 | --- | (2.2) | | | | | 7.4 | (3.0) |
| 03 | (330) | (2.8) | | | | | 6.2 | (2.8) |
| 04 | --- | (2.0) | | | | | 6.5 | --- |
| 05 | (300) | (2.6) | | | | | 6.6 | (3.0) |
| 06 | (300) | (3.0) | | | | | 6.8 | (3.0) |
| 07 | (290) | (2.3) | | | | | 4.2 | --- |
| 08 | (280) | (2.0) | | | | | | (3.2) |
| 09 | 240 | 3.4 | | | --- | --- | | 3.3 |
| 10 | 240 | 4.2 | | | --- | --- | | 3.3 |
| 11 | 240 | 4.9 | | | --- | --- | | 3.4 |
| 12 | 220 | 4.8 | | | --- | --- | | 3.4 |
| 13 | 220 | 4.8 | | | | | | 3.4 |
| 14 | 220 | 4.8 | | | | | | 3.4 |
| 15 | 220 | 4.5 | | | | | | 3.3 |
| 16 | 220 | 3.8 | | | | | | 3.3 |
| 17 | 230 | (2.8) | | | | | | (3.3) |
| 18 | --- | --- | | | | | (3.0) | --- |
| 19 | --- | --- | | | | | (6.7) | --- |
| 20 | --- | --- | | | | | (5.6) | --- |
| 21 | --- | --- | | | | | 3.3 | --- |
| 22 | --- | --- | | | | | 6.0 | --- |
| 23 | --- | --- | | | | | 5.6 | --- |

Time: 150.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 15 seconds.

Table 19

Reykjavik, Iceland (64.1°N, 21.8°W) January 1953

| Time | h'F2 | foF2 | h'F1 | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|
| 00 | --- | 3.2 | | | | | 4.9 | --- |
| 01 | (340) | 3.0 | | | | | 4.9 | (2.8) |
| 02 | (340) | 3.0 | | | | | 4.5 | (2.8) |
| 03 | 320 | 2.8 | | | | | 4.2 | 2.9 |
| 04 | 300 | 2.6 | | | | | 4.1 | 3.0 |
| 05 | 270 | 2.4 | | | | | 2.2 | 3.1 |
| 06 | 270 | 2.1 | | | | | | 3.2 |
| 07 | (270) | (1.7) | | | | | 2.3 | (3.2) |
| 08 | (260) | (1.6) | | | | | | 3.0 |
| 09 | 250 | 2.7 | | | --- | --- | | 3.2 |
| 10 | 230 | 4.2 | --- | --- | --- | --- | | 3.4 |
| 11 | 230 | 5.2 | --- | --- | --- | --- | | 3.5 |
| 12 | 220 | 5.6 | --- | --- | 130 | --- | | 3.5 |
| 13 | 230 | 5.5 | --- | --- | --- | --- | | 3.5 |
| 14 | 230 | 4.8 | --- | --- | --- | --- | | 3.4 |
| 15 | 230 | 4.4 | --- | --- | --- | --- | | 3.4 |
| 16 | 230 | 3.8 | | | --- | --- | | 3.3 |
| 17 | 240 | 3.0 | | | | | 3.8 | 3.3 |
| 18 | 260 | 2.6 | | | | | 3.6 | 3.1 |
| 19 | (300) | (2.6) | | | | | 4.3 | (3.1) |
| 20 | 310 | (2.7) | | | | | 4.2 | (3.1) |
| 21 | (310) | (2.9) | | | | | 4.1 | (3.0) |
| 22 | (350) | (3.4) | | | | | 4.6 | (3.0) |
| 23 | --- | --- | | | | | 5.0 | --- |

Time: 15.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 18 seconds.

Table 20

De Bilt, Holland (52.1°N, 5.2°E) January 1953

| Time | h'F2 | foF2 | h'F1 | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|
| 00 | <270 | (2.5) | | | | | | (3.0) |
| 01 | 270 | (2.7) | | | | | | (3.0) |
| 02 | 280 | (2.4) | | | | | | (3.0) |
| 03 | 270 | (2.6) | | | | | | --- |
| 04 | 240 | (2.0) | | | | | | (3.2) |
| 05 | 240 | (2.0) | | | | | | (3.4) |
| 06 | (230) | (2.0) | | | | | | (3.3) |
| 07 | 230 | (2.4) | | | | | | (3.3) |
| 08 | 205 | 4.8 | | | --- | E | 2.3 | 3.6 |
| 09 | 205 | 5.7 | --- | --- | 120 | 2.0 | 2.3 | 3.7 |
| 10 | 210 | 6.4 | 200 | 3.4 | 110 | 2.2 | | 3.7 |
| 11 | 210 | 6.6 | 205 | 3.4 | 110 | 2.5 | 3.3 | 3.7 |
| 12 | 210 | 6.8 | 200 | 3.4 | 110 | 2.5 | 3.2 | 3.6 |
| 13 | 210 | 6.4 | 205 | 3.4 | 110 | 2.4 | 3.2 | 3.6 |
| 14 | 210 | 5.8 | --- | --- | 110 | 2.1 | 2.7 | 3.6 |
| 15 | 205 | 5.4 | --- | --- | 125 | 2.0 | 3.1 | 3.6 |
| 16 | 200 | 4.8 | | | --- | E | | 3.6 |
| 17 | 205 | 3.8 | | | | | | 3.4 |
| 18 | 210 | 3.2 | | | | | | 3.4 |
| 19 | 220 | 2.5 | | | | | | 3.1 |
| 20 | <250 | 2.4 | | | | | | 3.1 |
| 21 | (230) | (2.4) | | | | | | 3.1 |
| 22 | <270 | (2.4) | | | | | | 3.0 |
| 23 | <260 | (2.5) | | | | | | 3.0 |

Time: 0.0°.
Sweep: 1.4 Mc to 11.2 Mc in 6 minutes, automatic operation.

Table 21

Schwarzenburg, Switzerland (46.8°N, 7.3°E) January 1953

| Time | h'F2 | foF2 | h'F1 | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|
| 00 | 255 | 3.1 | | | | | | 3.3 |
| 01 | 255 | 3.1 | | | | | | 3.3 |
| 02 | 275 | 3.0 | | | | | | 3.2 |
| 03 | 270 | 3.1 | | | | | | 3.2 |
| 04 | 250 | 3.0 | | | | | | 3.3 |
| 05 | 230 | 2.7 | | | | | | 3.4 |
| 06 | 240 | 2.4 | | | | | | 3.5 |
| 07 | 240 | 2.3 | | | | | | 3.6 |
| 08 | 200 | 3.6 | | | | | | 3.8 |
| 09 | 200 | 5.4 | | | 120 | 2.0 | | 4.0 |
| 10 | 200 | 6.1 | | | 100 | 2.4 | | 3.9 |
| 11 | 200 | 6.4 | | | 100 | 2.6 | | 3.8 |
| 12 | 200 | 6.5 | | | 100 | 2.6 | | 3.9 |
| 13 | 200 | 6.3 | | | 100 | 2.8 | | 3.9 |
| 14 | 200 | 6.0 | | | 100 | 2.5 | | 3.8 |
| 15 | 200 | 6.0 | | | 100 | 2.4 | | 3.9 |
| 16 | 200 | 5.7 | | | 100 | 2.0 | | 3.9 |
| 17 | 200 | 4.9 | | | | | | 3.9 |
| 18 | 200 | 3.8 | | | | | | 3.7 |
| 19 | 200 | 3.5 | | | | | | 3.7 |
| 20 | 220 | 2.8 | | | | | | 3.5 |
| 21 | 280 | 2.8 | | | | | | 3.3 |
| 22 | 250 | 3.0 | | | | | | 3.4 |
| 23 | 265 | 3.0 | | | | | | 3.2 |

Time: 15.0°E.
Sweep: 1.0 Mc to 25.0 Mc in 30 seconds.

Table 22

Baton Rouge, Louisiana (30.5°N, 91.2°W) January 1953

| Time | h'F2 | foF2 | h'F1 | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|
| 00 | 260 | 3.4 | | | | | | 3.1 |
| 01 | 270 | 3.4 | | | | | | 3.1 |
| 02 | 250 | 3.6 | | | | | | 3.1 |
| 03 | 260 | 3.5 | | | | | | 3.1 |
| 04 | 240 | 3.7 | | | | | 2.2 | 3.2 |
| 05 | 250 | 3.2 | | | | | | 3.1 |
| 06 | 250 | 3.0 | | | | | | 3.2 |
| 07 | 240 | 4.0 | | | | | | 3.5 |
| 08 | 230 | 5.4 | --- | --- | 130 | 2.0 | 4.2 | 3.6 |
| 09 | 240 | 5.5 | 220 | --- | 110 | 2.6 | 5.0 | 3.5 |
| 10 | 260 | 6.5 | 220 | 4.1 | 110 | 2.8 | 5.8 | 3.5 |
| 11 | 270 | 6.8 | 210 | 4.2 | 110 | 3.0 | 5.2 | 3.3 |
| 12 | 270 | 7.0 | 210 | 4.2 | 110 | 3.1 | 3.9 | 3.4 |
| 13 | 280 | 6.8 | 210 | 4.2 | 110 | 3.0 | 3.8 | 3.3 |
| 14 | 270 | 6.8 | 210 | 4.1 | 110 | 3.0 | 3.7 | 3.4 |
| 15 | 260 | 6.6 | 220 | 3.8 | 110 | 2.7 | 3.8 | 3.5 |
| 16 | 240 | 6.2 | 220 | --- | 120 | 2.2 | 3.4 | 3.5 |
| 17 | 230 | 5.5 | | | | | | 3.6 |
| 18 | 210 | 4.2 | | | | | | 3.5 |
| 19 | 230 | 3.0 | | | | | | 3.4 |
| 20 | 240 | 2.7 | | | | | | 3.3 |
| 21 | 280 | 2.9 | | | | | | 3.1 |
| 22 | 270 | 3.1 | | | | | | 3.1 |
| 23 | 270 | 3.4 | | | | | | 3.1 |

Time: 90.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 30 seconds.

Table 23

Formosa, China (25.0°N, 121.5°E) January 1953

| Time | h'F2 | foF2 | h'F1 | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|
| 00 | 280 | 3.1 | | | | | 2.6 | 2.9 |
| 01 | 260 | 3.2 | | | | | 2.4 | 3.1 |
| 02 | 260 | 3.0 | | | | | 2.4 | 3.0 |
| 03 | 280 | 2.7 | | | | | 2.2 | 3.1 |
| 04 | 270 | 2.0 | | | | | 2.2 | 2.8 |
| 05 | <320 | 2.2 | | | | | 2.2 | 2.7 |
| 06 | <290 | 2.0 | | | | | 2.1 | 2.9 |
| 07 | 250 | 4.7 | | | 160 | 1.7 | 2.2 | 3.3 |
| 08 | 250 | 6.7 | 240 | --- | 120 | 2.2 | 2.5 | 3.3 |
| 09 | 270 | 7.6 | 240 | 4.1 | 120 | 2.7 | 3.7 | 3.3 |
| 10 | 280 | 9.0 | 230 | 4.3 | 120 | (3.0) | 4.2 | 3.3 |
| 11 | 280 | 10.6 | 215 | 4.4 | (120) | 3.2 | 4.4 | 3.3 |
| 12 | 280 | 12.2 | 210 | 4.4 | (120) | 3.2 | 4.4 | 3.2 |
| 13 | 280 | 11.5 | 220 | 4.4 | (120) | 3.2 | 4.4 | 3.3 |
| 14 | 280 | 10.8 | 220 | 4.2 | (120) | 3.6 | 4.3 | 3.2 |
| 15 | 270 | 9.4 | 220 | 3.8 | (120) | --- | 4.3 | 3.4 |
| 16 | 240 | 7.7 | 230 | 3.5 | (120) | 2.3 | 4.2 | 3.4 |
| 17 | 240 | 6.6 | | | (120) | --- | 3.6 | 3.6 |
| 18 | 235 | 5.2 | | | | | 3.4 | 3.2 |
| 19 | 240 | 4.9 | | | | | 3.5 | 3.1 |
| 20 | 240 | 5.2 | | | | | 2.8 | 3.1 |
| 21 | 240 | 4.1 | | | | | 2.4 | 3.2 |
| 22 | 260 | 3.4 | | | | | 2.4 | 3.1 |
| 23 | 280 | 3.1 | | | | | 2.3 | 3.0 |

Time: 120.0°E.
Sweep: 1.1 Mc to 19.5 Mc in 15 minutes, manual operation.

Table 24

Baker Lake, Canada (64.3°N, 98.0°W) December 1952

| Time | h'F2 | foF2 | h'F1 | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|
| 00 | 240 | 2.4 | | | --- | E | 7.5 | 3.0 |
| 01 | 250 | 2.4 | | | --- | E | 6.9 | 3.0 |
| 02 | 250 | 2.5 | | | --- | E | 5.9 | 3.0 |
| 03 | 250 | 2.5 | | | --- | E | 4.7 | 3.0 |
| 04 | 280 | 2.4 | --- | --- | 140 | 1.6 | 5.5 | 3.0 |
| 05 | 290 | 2.5 | --- | --- | 140 | 1.6 | 4.2 | 3.0 |
| 06 | 300 | 2.7 | --- | --- | 110 | 1.8 | 6.0 | 3.0 |
| 07 | 270 | 2.9 | --- | --- | 110 | 1.9 | 5.0 | 3.0 |
| 08 | 260 | 3.0 | --- | --- | 100 | 2.1 | 6.0 | 3.0 |
| 09 | 280 | 3.2 | --- | --- | 110 | 2.2 | 5.9 | 3.0 |
| 10 | 270 | 3.8 | --- | --- | 100 | 2.5 | 6.0 | 3.0 |
| 11 | 270 | 4.2 | --- | --- | 100 | 2.7 | 3.8 | 3.0 |
| 12 | 260 | 4.3 | --- | --- | 100 | 2.5 | 3.6 | 3.0 |
| 13 | 260 | 4.8 | --- | --- | 100 | 2.4 | 3.5 | 3.0 |
| 14 | 250 | 4.9 | --- | --- | 100 | 2.4 | 3.3 | 3.0 |
| 15 | 250 | 4.0 | --- | --- | 100 | 2.0 | 3.8 | 3.0 |
| 16 | 270 | 3.2 | --- | --- | 110 | 2.0 | 4.0 | 3.0 |
| 17 | 270 | 3.4 | --- | --- | 110 | 1.9 | 4.1 | 2.9 |
| 18 | 270 | 3.5 | --- | --- | 110 | 2.0 | 5.2 | 3.0 |
| 19 | 240 | 3.2 | --- | --- | 120 | 1.8 | 5.0 | 3.0 |
| 20 | 250 | 2.8 | --- | --- | --- | 1.7 | 6.2 | 3.0 |
| 21 | 280 | 2.5 | --- | --- | --- | E | 7.5 | 3.0 |
| 22 | 280 | 2.4 | --- | --- | --- | E | 7.0 | 3.0 |
| 23 | 250 | 2.6 | --- | --- | --- | E | 7.0 | 3.0 |

Time: 90.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 15 seconds.

Table 25

Reykjavik, Iceland (64.1°N, 21.8°W) December 1952

| Time | h'F2 | foF2 | h'F1 | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|
| 00 | --- | --- | | | | | 5.6 | --- |
| 01 | --- | --- | | | | | 5.0 | --- |
| 02 | --- | 3.0 | | | | | 4.9 | 2.9 |
| 03 | 340 | 2.8 | | | | | 4.8 | 3.0 |
| 04 | (320) | 2.6 | | | | | 5.0 | 3.0 |
| 05 | 285 | 2.4 | | | | | 3.8 | 3.0 |
| 06 | 275 | 2.0 | | | | | 3.9 | 3.2 |
| 07 | (290) | (1.9) | | | --- | --- | 2.7 | 3.2 |
| 08 | 286 | 1.8 | | | --- | --- | 2.0 | 3.1 |
| 09 | 260 | 2.2 | | | --- | --- | | 3.2 |
| 10 | 240 | 3.4 | --- | --- | 120 | --- | | 3.4 |
| 11 | 230 | 4.2 | --- | --- | 110 | --- | | 3.4 |
| 12 | 240 | 4.5 | 240 | --- | 130 | --- | | 3.5 |
| 13 | 240 | 4.7 | --- | --- | 130 | --- | | 3.4 |
| 14 | 240 | 4.4 | --- | --- | 135 | --- | | 3.4 |
| 15 | 240 | 3.9 | | | 120 | --- | | 3.3 |
| 16 | 260 | 3.4 | | | --- | --- | 2.4 | 3.3 |
| 17 | 280 | 3.0 | | | 120 | --- | 3.7 | 3.1 |
| 18 | 300 | 2.4 | | | --- | --- | 4.0 | 3.2 |
| 19 | (300) | (1.9) | | | | | 4.8 | --- |
| 20 | --- | --- | | | | | 4.6 | --- |
| 21 | --- | --- | | | | | 4.6 | --- |
| 22 | --- | --- | | | | | 4.3 | --- |
| 23 | --- | (2.9) | | | | | 4.9 | (3.0) |

Time: 16.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 18 seconds.

Table 26

Churchill, Canada (58.8°N, 94.2°W) December 1952

| Time | h'F2 | foF2 | h'F1 | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|
| 00 | (280) | 2.8 | | | 120 | 2.8 | 5.3 | (3.3) |
| 01 | (310) | 2.8 | | | 120 | 2.4 | 6.5 | (3.0) |
| 02 | 300 | 2.5 | | | 120 | 2.2 | 4.0 | (2.9) |
| 03 | (290) | 2.8 | | | 110 | 2.4 | 3.8 | (3.2) |
| 04 | (300) | 3.0 | | | 120 | 3.0 | | (3.0) |
| 05 | (320) | <3.2 | | | 110 | 3.0 | 3.3 | --- |
| 06 | (310) | <3.3 | | | 110 | 3.0 | | (3.3) |
| 07 | (340) | <3.3 | | | 110 | 3.2 | 3.7 | (3.2) |
| 08 | (320) | 2.6 | --- | --- | 100 | 2.9 | | (3.2) |
| 09 | 300 | 4.0 | --- | --- | 120 | 2.2 | | 3.1 |
| 10 | 250 | 4.8 | --- | --- | --- | 2.0 | | 3.3 |
| 11 | 250 | 5.3 | --- | --- | --- | 2.2 | | 3.3 |
| 12 | 250 | 6.5 | --- | --- | --- | --- | | 3.3 |
| 13 | 260 | 5.9 | | | --- | 2.3 | | 3.2 |
| 14 | 260 | 5.8 | | | 130 | 2.6 | | 3.2 |
| 15 | 270 | 5.7 | | | 120 | 2.8 | | 3.3 |
| 15 | 270 | 6.5 | | | 120 | (3.0) | | 3.0 |
| 17 | 270 | 4.5 | | | 120 | 2.5 | | 3.1 |
| 18 | 280 | 3.5 | | | 110 | 2.3 | | 2.9 |
| 19 | 300 | <3.6 | | | 110 | 2.6 | | 2.9 |
| 20 | 300 | 3.4 | | | 110 | 2.6 | | 3.0 |
| 21 | 300 | 3.0 | | | 120 | 2.7 | 7.0 | 2.8 |
| 22 | 300 | 3.0 | | | 120 | 2.9 | 6.1 | (3.0) |
| 23 | (270) | 3.0 | | | 110 | 3.2 | 5.0 | (3.1) |

Time: 90.0°W.
Sweep: 0.5 Mc to 20.0 Mc in 15 seconds.

Table 27

Fort Chimo, Canada (58.1°N, 68.3°W) December 1952

| Time | h'F2 | foF2 | h'F1 | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|
| 00 | 300 | 2.6 | | | 110 | 3.1 | 4.8 | (3.0) |
| 01 | 320 | 2.8 | | | 100 | 2.8 | 4.0 | (2.9) |
| 02 | 300 | <2.8 | | | 110 | 2.9 | 4.0 | (3.0) |
| 03 | 320 | 3.2 | | | 110 | 3.0 | | (2.9) |
| 04 | 350 | <3.0 | | | 100 | 3.0 | 3.8 | 3.0 |
| 05 | (400) | <3.8 | | | 100 | 3.3 | 5.0 | (2.9) |
| 06 | (340) | <3.2 | | | 100 | 3.2 | 4.5 | (3.0) |
| 07 | 340 | 2.8 | | | 110 | 2.8 | 4.0 | 2.8 |
| 08 | 300 | 3.4 | | | 100 | 2.4 | | 3.0 |
| 09 | 260 | 4.2 | | | 100 | 2.0 | | 3.1 |
| 10 | 250 | 5.0 | | | 110 | 2.2 | | 3.1 |
| 11 | 260 | 5.5 | | | 110 | 2.3 | | 3.0 |
| 12 | 270 | 5.9 | | | 110 | 2.3 | | 3.0 |
| 13 | 270 | 5.8 | | | 110 | 2.4 | | 3.0 |
| 14 | 250 | 5.0 | | | 110 | 2.5 | | 3.0 |
| 15 | 280 | 4.8 | | | 110 | 2.5 | | 3.0 |
| 15 | 280 | 4.1 | | | 110 | 2.4 | | 3.0 |
| 17 | 300 | 3.8 | | | 110 | 2.4 | 2.0 | 2.9 |
| 18 | 320 | 3.3 | | | 110 | 2.9 | 4.0 | 2.9 |
| 19 | 300 | 3.0 | | | 110 | 2.6 | 4.9 | 2.8 |
| 20 | 300 | 3.1 | | | 100 | 2.5 | 4.7 | 2.9 |
| 21 | 300 | <3.1 | | | 110 | 2.0 | 6.0 | (2.8) |
| 22 | 300 | 2.7 | | | 100 | 2.8 | 5.0 | 3.0 |
| 23 | 320 | 2.5 | | | 100 | 2.6 | 5.3 | (3.0) |

Time: 75.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 15 seconds.

Table 28

Prince Rupert, Canada (54.3°N, 130.3°W) December 1952

| Time | h'F2 | foF2 | h'F1 | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|
| 00 | (320) | 1.6 | | | | | | --- |
| 01 | 310 | 1.5 | | | | | | (2.8) |
| 02 | (340) | 1.5 | | | | | | (2.8) |
| 03 | (370) | 1.8 | | | | | 3.2 | --- |
| 04 | (400) | 2.0 | | | | | 2.2 | (2.5) |
| 05 | (350) | 1.9 | | | | | 3.7 | --- |
| 06 | (390) | 2.1 | | | | | 3.6 | (2.5) |
| 07 | (300) | 1.9 | | | | | | (2.8) |
| 08 | 320 | 2.1 | | | | | | 2.8 |
| 09 | 280 | 3.6 | | | --- | 1.5 | 2.2 | 2.8 |
| 10 | 270 | 5.0 | | | 120 | 2.0 | 2.2 | 2.9 |
| 11 | 260 | 5.8 | --- | --- | 120 | 2.2 | | 3.0 |
| 12 | 250 | 5.9 | --- | --- | 120 | 2.2 | | 2.8 |
| 13 | 260 | 6.0 | 260 | --- | 120 | 2.2 | | 2.9 |
| 14 | 250 | 6.3 | --- | --- | 130 | 2.2 | | 2.9 |
| 15 | 260 | 5.9 | | | --- | 2.0 | | 2.9 |
| 16 | 250 | 5.0 | | | --- | 1.7 | | 2.9 |
| 17 | 260 | 3.9 | | | --- | --- | | 2.7 |
| 18 | 270 | 3.2 | | | | | | 2.8 |
| 19 | 290 | 2.4 | | | | | | 2.9 |
| 20 | (300) | 1.8 | | | | | | (2.8) |
| 21 | --- | (1.8) | | | | | | --- |
| 22 | --- | (1.7) | | | | | 2.0 | --- |
| 23 | --- | (1.8) | | | | | | --- |

Time: 120.0°W.
Sweep: 0.5 Mc to 20.0 Mc in 15 seconds.
*15th to 31st only; height markers in error first half of month.

Table 29

Winnipeg, Canada (49.9°N, 97.4°W) December 1952

| Time | h'F2 | foF2 | h'F1 | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|
| 00 | 330 | 2.4 | | | | | | 3.0 |
| 01 | 340 | 2.5 | | | | | | 2.9 |
| 02 | 350 | 2.4 | | | | | 3.0 | 2.8 |
| 03 | 320 | 2.5 | | | | | 3.2 | 3.0 |
| 04 | 320 | 2.4 | | | | | 4.1 | 3.0 |
| 05 | 320 | 2.5 | | | | | 3.6 | 2.8 |
| 06 | 350 | 2.5 | | | | | 4.0 | (3.0) |
| 07 | 320 | 2.5 | | | | | 4.0 | (3.0) |
| 08 | 260 | 2.7 | | | --- | --- | | 3.2 |
| 09 | 240 | 4.2 | --- | --- | 110 | 2.0 | | 3.4 |
| 10 | 240 | 5.2 | 220 | --- | 110 | 2.3 | | 3.4 |
| 11 | 250 | 5.0 | 220 | --- | 120 | 2.4 | | 3.4 |
| 12 | 250 | 5.1 | 230 | 3.4 | 110 | 2.4 | | 3.4 |
| 13 | 250 | 5.2 | 220 | 3.4 | 120 | 2.5 | | 3.4 |
| 14 | 240 | 5.3 | 240 | --- | 120 | 2.3 | | 3.4 |
| 15 | 240 | 5.2 | 240 | --- | 120 | 2.2 | | 3.4 |
| 15 | 230 | 6.0 | | | --- | --- | | 3.4 |
| 17 | 220 | 4.9 | | | | | | 3.3 |
| 18 | 230 | 4.0 | | | | | | 3.3 |
| 19 | 260 | 3.0 | | | | | | 3.2 |
| 20 | 280 | 2.4 | | | | | | 3.2 |
| 21 | 300 | 2.3 | | | | | | 3.0 |
| 22 | 320 | 2.4 | | | | | | 2.9 |
| 23 | 330 | 2.4 | | | | | | 2.8 |

Time: 90.0°W.
Sweep: 0.5 Mc to 20.0 Mc in 16 seconds.

Table 30

St. John's, Newfoundland (47.6°N, 52.7°W) December 1952

| Time | h'F2 | foF2 | h'F1 | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|
| 00 | 330 | 1.8 | | | | | | 2.9 |
| 01 | 330 | 1.8 | | | | | | 2.8 |
| 02 | 330 | 1.8 | | | | | 2.0 | 2.9 |
| 03 | 290 | 1.9 | | | | | 2.9 | 3.0 |
| 04 | 300 | 1.7 | | | | | 3.4 | 3.0 |
| 05 | 270 | 1.4 | | | | | 3.7 | 3.0 |
| 05 | 300 | 1.5 | | | | | 4.0 | 3.0 |
| 07 | 250 | 3.0 | --- | --- | 120 | E | 1.7 | 3.1 |
| 08 | 230 | 4.5 | 220 | --- | 120 | 1.8 | 2.4 | 3.4 |
| 09 | 240 | 5.4 | 210 | 3.0 | 120 | 2.2 | 2.5 | 3.4 |
| 10 | 250 | 5.2 | 220 | 3.5 | 120 | 2.4 | | 3.4 |
| 11 | 240 | 5.3 | 220 | 3.5 | 120 | 2.5 | | 3.4 |
| 12 | 240 | 5.5 | 220 | 3.5 | 120 | 2.5 | 2.4 | 3.4 |
| 13 | 240 | 5.3 | 220 | 3.4 | 120 | 2.4 | 2.5 | 3.4 |
| 14 | 240 | 5.3 | 230 | 2.9 | 120 | 2.2 | 2.7 | 3.4 |
| 15 | 230 | 5.3 | --- | --- | 130 | E | | 3.4 |
| 16 | 220 | 5.2 | | | --- | E | | 3.3 |
| 17 | 230 | 4.4 | | | | | | 3.2 |
| 18 | 240 | 3.5 | | | | | | 3.1 |
| 19 | 250 | 2.5 | | | | | | 3.0 |
| 20 | 300 | 2.3 | | | | | | 3.0 |
| 21 | 330 | 2.0 | | | | | | 2.9 |
| 22 | 320 | 1.8 | | | | | | 2.9 |
| 23 | 320 | 1.9 | | | | | | 2.9 |

Time: 60.0°W.
Sweep: 0.6 Mc to 20.0 Mc in 15 seconds.

Table 31

Ottawa, Canada (45.4°N, 75.7°W) December 1952

| Time | h'F2 | foF2 | h'F1 | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|
| 00 | --- | (2.0) | | | | | | (3.1) |
| 01 | --- | 2.0 | | | | | | 3.1 |
| 02 | (300) | 2.1 | | | | | | 3.0 |
| 03 | 300 | 2.3 | | | | | | 3.1 |
| 04 | (280) | 2.0 | | | | | | 3.2 |
| 05 | (280) | 2.0 | | | | | 2.1 | 3.3 |
| 06 | --- | 2.0 | | | | | 3.5 | (3.3) |
| 07 | 290 | 2.3 | | | | | | 3.1 |
| 08 | 230 | 4.2 | | | --- | 1.8 | | 3.4 |
| 09 | 220 | 5.1 | 220 | --- | 120 | 2.3 | | 3.4 |
| 10 | 240 | 6.2 | 220 | --- | 120 | 2.7 | | 3.4 |
| 11 | 240 | 6.8 | 230 | 3.4 | 120 | 2.7 | | 3.4 |
| 12 | 240 | 6.8 | 230 | --- | 120 | 2.8 | | 3.4 |
| 13 | 250 | 6.6 | 230 | --- | 120 | 2.7 | | 3.4 |
| 14 | 250 | 6.5 | 230 | --- | 120 | 2.5 | | 3.3 |
| 15 | 240 | 6.4 | 240 | --- | 120 | 2.2 | | 3.4 |
| 16 | 230 | 5.9 | | | --- | --- | | 3.4 |
| 17 | 220 | 5.0 | | | | | | 3.3 |
| 18 | 230 | 4.0 | | | | | | 3.3 |
| 19 | 240 | 3.2 | | | | | | 3.2 |
| 20 | 260 | 2.7 | | | | | | 3.2 |
| 21 | (290) | 2.3 | | | | | | 3.2 |
| 22 | (280) | 2.2 | | | | | | 3.1 |
| 23 | --- | 2.0 | | | | | | (3.1) |

Time: 75.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 15 seconds.

Table 32

Baguio, P.I. (16.4°N, 120.6°E) December 1952

| Time | h'F2 | foF2 | h'F1 | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|
| 00 | 250 | 3.5 | | | | | | 3.1 |
| 01 | 240 | 3.3 | | | | | | 3.1 |
| 02 | 240 | 3.3 | | | | | | 3.2 |
| 03 | 220 | 2.9 | | | | | | 3.1 |
| 04 | 240 | 2.1 | | | | | | 3.2 |
| 05 | (250) | (2.1) | | | | | | 3.0 |
| 06 | 270 | 2.6 | | | | | | 3.0 |
| 07 | 240 | 5.5 | | | --- | --- | | 3.4 |
| 08 | (260) | 7.3 | 230 | --- | 120 | 2.5 | 2.9 | 3.3 |
| 09 | 280 | 9.0 | 210 | (4.2) | 110 | 2.8 | 3.6 | 3.3 |
| 10 | 290 | 9.4 | 200 | 4.3 | 110 | 3.0 | 3.7 | 3.1 |
| 11 | 310 | 9.7 | 200 | (4.4) | 110 | 3.2 | 4.2 | 2.8 |
| 12 | 320 | 9.4 | 200 | (4.5) | 110 | 3.2 | 4.4 | 2.7 |
| 13 | 310 | 9.5 | 200 | 4.5 | 100 | 3.1 | 4.2 | 2.8 |
| 14 | 290 | 9.9 | 210 | --- | 110 | 3.0 | 4.0 | 3.0 |
| 15 | 270 | 10.0 | 220 | --- | 110 | 2.8 | 4.4 | 3.1 |
| 16 | 250 | 10.0 | 220 | --- | 110 | 2.4 | 4.0 | 3.3 |
| 17 | 230 | 9.6 | | | | | 2.6 | 3.4 |
| 18 | 210 | 8.8 | | | | | | 3.5 |
| 19 | 210 | 7.4 | | | | | 2.2 | 3.3 |
| 20 | 220 | 6.5 | | | | | 2.6 | 3.1 |
| 21 | 230 | 6.4 | | | | | | 3.2 |
| 22 | 220 | 5.5 | | | | | | 3.4 |
| 23 | 230 | 4.2 | | | | | | 3.4 |

Time: 120.0°E.
Sweep: 1.0 Mc to 25.0 Mc in 15 seconds.

Table 33

Johannesburg, Union of S. Africa (26.2°S, 28.1°E) December 1952

| Time | h'F2 | foF2 | h'F1 | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|
| 00 | 270 | 4.4 | | | | | | 2.9 |
| 01 | 260 | 4.1 | | | | | 1.6 | 3.0 |
| 02 | 250 | 3.9 | | | | | | 3.0 |
| 03 | 250 | 3.6 | | | | | | 3.0 |
| 04 | 260 | 3.3 | | | | | 1.7 | 3.0 |
| 05 | 270 | 3.4 | | | | | | 3.0 |
| 06 | 240 | 4.9 | 240 | --- | 120 | 2.0 | 2.8 | 3.1 |
| 07 | 340 | 5.5 | 230 | 4.0 | 110 | 2.6 | 3.1 | 3.0 |
| 08 | 340 | 6.1 | 220 | 4.2 | 110 | 3.0 | 3.4 | 2.9 |
| 09 | 340 | 6.7 | 220 | 4.4 | 110 | 3.2 | 3.7 | 2.9 |
| 10 | 340 | 7.0 | 210 | 4.5 | 110 | 3.4 | 3.9 | 2.9 |
| 11 | 340 | 7.3 | 200 | 4.6 | 110 | 3.5 | 3.8 | 2.9 |
| 12 | 330 | 7.7 | 200 | 4.6 | 110 | 3.5 | 4.0 | 2.9 |
| 13 | 330 | 7.6 | 200 | 4.6 | 110 | 3.5 | 3.6 | 2.9 |
| 14 | 330 | 7.2 | 210 | 4.5 | 110 | 3.4 | 4.1 | 2.9 |
| 15 | 320 | 7.4 | 210 | 4.4 | 110 | 3.2 | 3.9 | 2.9 |
| 16 | 310 | 7.3 | 220 | 4.2 | 110 | 3.0 | 3.8 | 3.0 |
| 17 | 290 | 7.0 | 230 | 3.9 | 110 | 2.7 | 3.4 | 3.0 |
| 18 | 270 | 6.6 | 230 | 3.2 | 120 | 2.1 | 2.9 | 3.1 |
| 19 | 250 | 6.7 | | | --- | --- | 2.6 | 3.1 |
| 20 | 250 | 6.5 | | | | | 2.1 | 3.0 |
| 21 | 250 | 6.0 | | | | | | 3.1 |
| 22 | 260 | 5.1 | | | | | 1.9 | 3.0 |
| 23 | 260 | 4.6 | | | | | | 2.9 |

Time: 30.0°E.
Sweep: 1.0 Mc to 15.0 Mc in 7 seconds.

Table 34

Watheroo, W. Australia (30.3°S, 115.9°E) December 1952

| Time | h'F2 | foF2 | h'F1 | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|
| 00 | 250 | 4.7 | | | | | 3.8 | 3.0 |
| 01 | 250 | 4.3 | | | | | 4.1 | 3.1 |
| 02 | 250 | 4.3 | | | | | 3.9 | 3.0 |
| 03 | 250 | 3.9 | | | | | 4.0 | 3.0 |
| 04 | 260 | 3.4 | | | | | 3.6 | 3.1 |
| 05 | 260 | 3.2 | | | | --- | 2.8 | 3.1 |
| 06 | (270) | 4.1 | 230 | 3.1 | | 2.0 | 2.9 | 3.4 |
| 07 | (320) | 4.9 | 230 | 3.8 | | 2.5 | 3.7 | 3.3 |
| 08 | (330) | 5.4 | 220 | 4.2 | | 3.0 | 3.8 | 3.2 |
| 09 | 340 | 5.6 | 210 | 4.3 | | 3.2 | 4.1 | 3.0 |
| 10 | 350 | 6.0 | 200 | 4.4 | | 3.3 | 4.1 | 3.0 |
| 11 | 340 | 6.3 | --- | 4.4 | | 3.4 | 4.2 | 3.0 |
| 12 | 330 | 6.5 | --- | --- | | 3.4 | 4.2 | 3.0 |
| 13 | 330 | 6.6 | 200 | 4.4 | | 3.4 | 4.2 | 3.0 |
| 14 | 320 | 6.8 | 205 | 4.4 | | 3.3 | 4.6 | 3.0 |
| 15 | 310 | 6.4 | 220 | 4.3 | | 3.2 | 4.7 | 3.1 |
| 16 | 300 | 6.3 | 220 | 4.2 | | 3.0 | 4.2 | 3.0 |
| 17 | 290 | 6.1 | 220 | 4.0 | | 2.7 | 4.2 | 3.1 |
| 18 | 270 | 5.9 | 230 | 3.5 | | 2.2 | 3.6 | 3.1 |
| 19 | 250 | 6.0 | --- | --- | | --- | 3.2 | 3.2 |
| 20 | 240 | 5.8 | | | | | 2.1 | 3.1 |
| 21 | 250 | 5.5 | | | | | 2.4 | 3.0 |
| 22 | 260 | 5.0 | | | | | 2.4 | 3.0 |
| 23 | 260 | 4.8 | | | | | 3.0 | 3.0 |

Time: 120.0°E.
Sweep: 1.0 Mc to 16.0 Mc in 2 minutes.

Table 35

Capetown, Union of S. Africa (34.2°S, 18.3°E) December 1952

| Time | h'F2 | foF2 | h'F1 | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|
| 00 | 270 | 3.9 | | | | | 1.7 | 2.9 |
| 01 | 280 | 3.9 | | | | | 1.8 | 2.8 |
| 02 | 280 | 3.8 | | | | | 2.0 | 2.9 |
| 03 | 270 | 3.7 | | | | | 1.7 | 2.9 |
| 04 | 270 | 3.6 | | | | | 1.8 | 2.9 |
| 05 | 270 | 3.5 | | | | | | 2.9 |
| 06 | 250 | 4.4 | 250 | --- | 130 | 1.8 | | 3.1 |
| 07 | 340 | 5.0 | 230 | 3.6 | 120 | 2.4 | | 3.0 |
| 08 | 350 | 5.6 | 230 | 4.0 | 110 | 2.9 | 3.3 | 2.9 |
| 09 | 370 | 5.8 | 230 | 4.2 | 110 | 3.1 | | 2.8 |
| 10 | 400 | 6.0 | 220 | 4.5 | 110 | 3.3 | 3.6 | 2.8 |
| 11 | 370 | 6.7 | 220 | 4.5 | 110 | 3.5 | 3.9 | 2.8 |
| 12 | 350 | 6.7 | 210 | 4.6 | 110 | 3.5 | 4.1 | 2.9 |
| 13 | 360 | 6.6 | 210 | 4.6 | 110 | 3.5 | 4.0 | 2.8 |
| 14 | 360 | 6.6 | 210 | 4.5 | 110 | 3.4 | 4.0 | 2.8 |
| 15 | 350 | 6.6 | 210 | 4.5 | 110 | 3.3 | 4.0 | 2.9 |
| 16 | 330 | 6.6 | 220 | 4.3 | 110 | 3.1 | 3.8 | 2.9 |
| 17 | 320 | 6.6 | 220 | 4.0 | 110 | 2.9 | 3.6 | 3.0 |
| 18 | 300 | 6.1 | 230 | 3.8 | 110 | 2.6 | 3.1 | 3.1 |
| 19 | 270 | 6.1 | 240 | 3.0 | 120 | 2.0 | 2.8 | 3.2 |
| 20 | 240 | 6.0 | | | | | 2.4 | 3.2 |
| 21 | 240 | 5.5 | | | | | 2.1 | 3.1 |
| 22 | 250 | 4.8 | | | | | 1.9 | 3.1 |
| 23 | 250 | 4.1 | | | | | 2.0 | 3.0 |

Time: 30.0°E.
Sweep: 1.0 Mc to 15.0 Mc in 7 seconds.

Table 36

Resolute Bay, Canada (74.7°N, 94.9°W) November 1952

| Time | h'F2 | foF2 | h'F1 | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|
| 00 | 270 | 2.7 | | | | | | 2.9 |
| 01 | 260 | 2.8 | | | | | | 2.9 |
| 02 | 270 | 2.7 | | | | | | 2.9 |
| 03 | 260 | 2.7 | | | | | | 2.9 |
| 04 | 270 | 2.7 | | | | | | 2.8 |
| 05 | 270 | 2.8 | | | | | | 2.9 |
| 06 | 260 | 2.7 | | | | | | 2.9 |
| 07 | 270 | 3.0 | | | | | | 3.0 |
| 08 | 260 | 3.4 | | | | | | 2.8 |
| 09 | 250 | 4.0 | | | | | | 2.9 |
| 10 | 250 | 3.8 | | | | | | 3.0 |
| 11 | 240 | 4.5 | | | | | | 3.0 |
| 12 | 250 | 4.0 | | | | | | 3.0 |
| 13 | 240 | 3.9 | | | | | | 3.0 |
| 14 | 240 | 4.0 | | | | | | 3.0 |
| 15 | 250 | 4.0 | | | | | | 2.9 |
| 16 | 250 | 3.9 | | | | | | 2.9 |
| 17 | 260 | 3.8 | | | | | | 3.0 |
| 18 | 260 | 3.4 | | | | | | 3.0 |
| 19 | 260 | 3.0 | | | | | | 3.0 |
| 20 | 260 | 3.1 | | | | | | 3.0 |
| 21 | 260 | 3.0 | | | | | 1.3 | 3.0 |
| 22 | 250 | 2.9 | | | | | | 2.9 |
| 23 | 250 | 2.8 | | | | | | 3.0 |

Time: 90.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 15 seconds.

Table 37

Baker Lake, Canada (64.3°N, 96.0°W) November 1952

| Time | h'F2 | foF2 | h'F1 | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|
| 00 | 260 | 2.4 | | | --- | E | 6.0 | 3.0 |
| 01 | 260 | 2.3 | | | --- | E | 5.0 | 3.0 |
| 02 | 280 | 2.5 | --- | --- | --- | E | 7.0 | 3.0 |
| 03 | 270 | 2.5 | --- | --- | --- | E | 4.1 | 2.9 |
| 04 | 270 | 2.5 | --- | --- | 110 | 1.7 | 5.0 | 3.0 |
| 05 | 280 | 2.6 | --- | --- | 110 | 1.9 | 3.7 | 3.0 |
| 06 | 270 | 2.8 | --- | --- | 100 | 1.8 | 4.1 | 3.0 |
| 07 | 280 | 2.8 | --- | --- | 100 | 1.9 | 4.6 | 2.9 |
| 08 | 280 | 3.3 | --- | --- | 100 | 2.1 | 4.0 | 3.0 |
| 09 | 260 | 3.9 | --- | --- | 100 | 2.5 | 4.7 | 2.9 |
| 10 | 260 | 4.2 | --- | --- | 100 | 2.6 | 4.1 | 3.0 |
| 11 | 270 | 4.6 | --- | --- | 110 | 2.7 | 3.2 | 3.0 |
| 12 | 260 | 5.0 | --- | --- | 100 | 2.7 | 3.2 | 3.0 |
| 13 | 260 | 5.2 | 240 | 2.9 | 110 | 2.5 | | 3.0 |
| 14 | 260 | 5.1 | --- | --- | 100 | 2.3 | 3.0 | 3.0 |
| 15 | 240 | 4.7 | --- | --- | 100 | 2.1 | 3.0 | 3.0 |
| 16 | 260 | 4.1 | --- | --- | 110 | 2.0 | 3.2 | 3.0 |
| 17 | 250 | 4.0 | | | 120 | 2.1 | 4.5 | 2.9 |
| 18 | 260 | 3.5 | | | 110 | 2.0 | 5.9 | 2.9 |
| 19 | 240 | 3.1 | | | 120 | 1.8 | 5.4 | 3.0 |
| 20 | 250 | 3.2 | | | 110 | 1.9 | 8.0 | 3.0 |
| 21 | 270 | 3.0 | | | 120 | 1.6 | 7.0 | 3.0 |
| 22 | 240 | 2.7 | | | --- | E | 7.0 | 3.0 |
| 23 | 250 | 2.5 | | | --- | E | 8.2 | 3.0 |

Time: 90.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 15 seconds.

Table 38

Fort Chimo, Canada (58.1°N, 68.3°W) November 1952

| Time | h'F2 | foF2 | h'F1 | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|
| 00 | 300 | <2.8 | | | 110 | 2.6 | 4.0 | (3.0) |
| 01 | (300) | <2.5 | | | 110 | 2.5 | 3.5 | (3.0) |
| 02 | (380) | <3.0 | | | 110 | 2.8 | | (3.0) |
| 03 | 300 | <3.0 | | | 100 | 3.0 | | (3.0) |
| 04 | (340) | <3.0 | | | 100 | 3.1 | 4.2 | (3.1) |
| 05 | 300 | 3.0 | | | 100 | 3.0 | 3.9 | (3.0) |
| 06 | 340 | 3.0 | | | 100 | 3.2 | 4.6 | (2.8) |
| 07 | 300 | <3.5 | | | 100 | 2.9 | 3.5 | 3.0 |
| 08 | 290 | 4.3 | --- | --- | 110 | 2.3 | | 3.1 |
| 09 | 290 | 4.8 | 250 | --- | 110 | 2.2 | | 3.1 |
| 10 | 290 | 5.2 | 250 | --- | 110 | 2.3 | | 3.1 |
| 11 | 290 | 5.8 | 250 | --- | 110 | 2.4 | | 3.0 |
| 12 | 290 | 5.9 | 250 | --- | 110 | 2.3 | | 3.0 |
| 13 | 280 | 5.9 | 270 | --- | 120 | 2.2 | | 3.0 |
| 14 | 280 | 5.3 | 260 | --- | 110 | 2.2 | | 3.0 |
| 15 | 270 | 5.0 | --- | --- | 110 | 2.0 | | 3.0 |
| 16 | 280 | 4.5 | | | 110 | 2.5 | | 3.0 |
| 17 | 310 | 3.8 | | | 110 | 2.6 | | 2.9 |
| 18 | 320 | 3.4 | | | 110 | 2.6 | | 2.8 |
| 19 | 300 | 3.0 | | | 110 | 2.2 | 4.6 | 2.9 |
| 20 | 300 | 3.0 | | | 110 | 2.4 | 6.0 | 2.9 |
| 21 | 300 | 2.8 | | | 100 | 2.5 | 5.0 | 3.0 |
| 22 | 300 | 2.8 | | | 100 | 2.5 | 4.8 | 2.9 |
| 23 | 300 | 2.8 | | | 110 | 2.8 | 4.9 | (2.9) |

Time: 75.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 15 seconds.

Table 39

Townsville, Australia (19.3°S, 146.8°E) November 1952

| Time | h'F2 | foF2 | h'F1 | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|
| 00 | 240 | 6.5 | | | | | 3.2 | 3.1 |
| 01 | 240 | 5.4 | | | | | 3.5 | 3.1 |
| 02 | 240 | 4.8 | | | | | 3.0 | 3.1 |
| 03 | 250 | 4.7 | | | | | 2.8 | 3.0 |
| 04 | 250 | 4.3 | | | | | 2.3 | 3.0 |
| 05 | 250 | 3.8 | | | --- | --- | 2.3 | 3.0 |
| 06 | 230 | 4.9 | | | 120 | 2.0 | 3.4 | 3.3 |
| 07 | 255 | 5.8 | 230 | 3.9 | 110 | 2.5 | 4.3 | 3.2 |
| 08 | 295 | 6.3 | 220 | 4.4 | 110 | 2.9 | 5.3 | 3.1 |
| 09 | 320 | 7.4 | 210 | 4.5 | 110 | 3.2 | 5.5 | 3.0 |
| 10 | 315 | 8.2 | 200 | 4.5 | 110 | 3.4 | 5.9 | 3.0 |
| 11 | 310 | 8.5 | 200 | 4.6 | 110 | 3.5 | 5.1 | 3.0 |
| 12 | 310 | 8.9 | 180 | 4.5 | 110 | 3.5 | >4.5 | 3.0 |
| 13 | 300 | 9.3 | 195 | 4.5 | 110 | 3.5 | 4.7 | 3.1 |
| 14 | 300 | 8.9 | 200 | 4.4 | 115 | 3.4 | 4.8 | 3.1 |
| 15 | 280 | 8.6 | 205 | 4.3 | 110 | 3.2 | >4.5 | 3.1 |
| 16 | 290 | 8.0 | 220 | 4.2 | 120 | 2.9 | 4.5 | 3.1 |
| 17 | 280 | 7.4 | 230 | 3.7 | 110 | 2.5 | 4.3 | 3.1 |
| 18 | 250 | 6.8 | | | 125 | <1.8 | 3.8 | 3.1 |
| 19 | 250 | 6.5 | | | | | 3.3 | 3.0 |
| 20 | 280 | 6.9 | | | | | 4.0 | 3.0 |
| 21 | 280 | 6.3 | | | | | 3.8 | 3.0 |
| 22 | 280 | (6.4) | | | | | 3.4 | 3.0 |
| 23 | 280 | 6.9 | | | | | 3.5 | 3.0 |

Time: 150.0°E.
Sweep: 1.0 Mc to 16.0 Mc in 1 mimute 55 seconds.

Table 40

Brisbane, Australia (27.5°S, 153.0°E) November 1952

| Time | h'F2 | foF2 | h'F1 | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|
| 00 | 250 | 6.0 | | | | | 3.8 | 3.1 |
| 01 | 220 | 5.3 | | | | | 3.1 | 3.1 |
| 02 | 240 | 4.5 | | | | | 3.0 | 3.1 |
| 03 | 250 | 3.9 | | | | | 2.7 | 3.0 |
| 04 | 250 | 3.7 | | | | | 2.7 | 3.1 |
| 05 | 230 | 4.0 | | | --- | 1.6 | | 3.3 |
| 06 | 240 | 4.9 | 225 | 3.7 | 120 | 2.2 | | 3.4 |
| 07 | 290 | 5.6 | 230 | 4.2 | 120 | 2.8 | | 3.1 |
| 08 | 300 | 6.0 | 225 | 4.4 | 110 | 3.1 | | 3.1 |
| 09 | 310 | 6.8 | 210 | 4.5 | 100 | 3.3 | | 3.1 |
| 10 | 310 | 7.4 | 200 | 4.5 | 100 | 3.4 | | 3.1 |
| 11 | 300 | 7.6 | 200 | 4.6 | 105 | 3.5 | | 3.0 |
| 12 | 300 | 7.5 | 200 | 4.6 | 100 | 3.5 | | 3.0 |
| 13 | 300 | 7.5 | 200 | 4.6 | 105 | 3.4 | | 3.0 |
| 14 | 300 | 7.2 | 210 | 4.5 | 110 | 3.3 | | 3.1 |
| 15 | 290 | 6.8 | 210 | 4.3 | 110 | 3.2 | | 3.1 |
| 16 | 285 | 6.5 | 220 | 4.0 | 110 | 2.9 | | 3.1 |
| 17 | 270 | 6.2 | 230 | 3.7 | 120 | 2.4 | | 3.1 |
| 18 | 260 | 6.4 | | | --- | --- | 3.4 | 3.0 |
| 19 | 265 | 6.6 | | | | | 3.6 | 2.9 |
| 20 | 280 | 6.5 | | | | | 3.6 | 2.9 |
| 21 | 280 | 6.3 | | | | | 3.2 | 2.9 |
| 22 | 280 | 6.2 | | | | | 3.5 | 2.9 |
| 23 | 270 | 6.0 | | | | | 4.0 | 3.0 |

Time: 150.0°E.
Sweep: 1.0 Mc to 16.0 Mc in 1 mimute 55 seconds.

Table 41

Canberra, Australia (35.3°S, 149.0°E) November 1952

| Time | h'F2 | foF2 | h'F1 | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|
| 00 | 250 | 5.5 | | | | | 3.0 | 3.0 |
| 01 | 240 | 4.7 | | | | | 3.0 | 3.1 |
| 02 | 230 | 4.1 | | | | | 2.8 | 3.0 |
| 03 | 240 | 3.7 | | | | | 2.8 | 3.0 |
| 04 | 240 | 3.4 | | | | | 2.6 | 3.0 |
| 05 | 245 | 3.8 | | | --- | 1.3 | 2.5 | 3.2 |
| 06 | 240 | 4.6 | 240 | (3.7) | 110 | 1.8 | 3.4 | 3.3 |
| 07 | 340 | 4.7 | 225 | 4.0 | 100 | 2.6 | 3.5 | 3.2 |
| 08 | 350 | 5.3 | 220 | 4.3 | 100 | 3.0 | 3.9 | 3.0 |
| 09 | 335 | 5.8 | 210 | 4.3 | 100 | 3.3 | 4.0 | 3.1 |
| 10 | 330 | 6.3 | 200 | 4.4 | 100 | 3.3 | 4.0 | 3.1 |
| 11 | 315 | 6.6 | 200 | 4.5 | 100 | 3.4 | 4.0 | 3.1 |
| 12 | 310 | 6.5 | 200 | 4.4 | 100 | 3.4 | 4.0 | 3.1 |
| 13 | 310 | 6.7 | 200 | 4.4 | 100 | 3.4 | 3.9 | 3.1 |
| 14 | 300 | 6.4 | 210 | 4.4 | 100 | 3.3 | 3.7 | 3.1 |
| 15 | 300 | 6.3 | 210 | 4.3 | 100 | 3.2 | 3.3 | 3.2 |
| 16 | 300 | 6.1 | 220 | 4.0 | 100 | 3.0 | | 3.2 |
| 17 | 275 | 6.0 | 230 | (3.9) | 110 | 2.6 | | 3.2 |
| 18 | 240 | 6.0 | --- | --- | 110 | 1.8 | 2.7 | 3.1 |
| 19 | 240 | 6.1 | | | --- | --- | 2.5 | 3.0 |
| 20 | 250 | 6.2 | | | | | 3.1 | 3.0 |
| 21 | 250 | 6.0 | | | | | 3.7 | 2.9 |
| 22 | 260 | 5.8 | | | | | 3.6 | 2.9 |
| 23 | 260 | 5.6 | | | | | 3.4 | 3.0 |

Time: 150.0°E.
Sweep: 1.0 Mc to 16.0 Mc in 1 mimute 55 seconds.

Table 42

Hobart, Tasmania (42.9°S, 147.3°E) November 1952

| Time | h'F2 | foF2 | h'F1 | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|
| 00 | 255 | 4.0 | | | | | | 2.9 |
| 01 | 260 | 3.5 | | | | | | 2.9 |
| 02 | 250 | 3.0 | | | | | | 3.0 |
| 03 | 250 | 3.0 | | | | | | 3.0 |
| 04 | 270 | 2.6 | | | | | | 3.0 |
| 05 | 250 | 3.5 | | | 120 | 1.6 | | 3.1 |
| 06 | 230 | 4.5 | | | 100 | 2.3 | | 3.1 |
| 07 | 220 | 4.5 | | | 100 | 2.7 | | 3.1 |
| 08 | 350 | 4.8 | 200 | 4.4 | 100 | 3.0 | | 3.0 |
| 09 | 370 | 5.4 | 200 | 4.5 | 100 | 3.2 | 4.2 | 2.9 |
| 10 | 360 | 5.6 | 200 | 4.5 | 100 | 3.4 | 4.3 | 2.9 |
| 11 | 355 | 5.6 | 200 | 4.5 | 100 | 3.5 | 4.4 | 2.9 |
| 12 | 350 | 6.0 | 200 | 4.5 | 100 | 3.5 | 4.2 | 2.9 |
| 13 | 330 | 6.0 | 200 | 4.5 | 100 | 3.5 | 4.4 | 2.9 |
| 14 | 310 | 6.2 | 200 | 4.5 | 100 | 3.5 | 4.5 | 3.0 |
| 15 | 310 | 6.0 | 200 | 4.5 | 100 | 3.4 | | 3.0 |
| 16 | 300 | 6.0 | 210 | 4.4 | 100 | 3.0 | | 3.0 |
| 17 | 210 | 5.9 | --- | --- | 100 | 2.7 | | 3.0 |
| 18 | 240 | 6.0 | | | 100 | 2.2 | | 3.0 |
| 19 | 250 | 6.0 | | | 120 | 1.6 | | 3.0 |
| 20 | 250 | 5.5 | | | | | | 3.0 |
| 21 | 250 | 5.5 | | | | | | 3.0 |
| 22 | 250 | 5.2 | | | | | | 3.0 |
| 23 | 250 | 4.5 | | | | | | 2.9 |

Time: 150.0°E.
Sweep: 1.0 Mc to 13.0 Mc in 1 minute 55 seconds.

Table 43

Delhi, India (28.6°N, 77.1°E) October 1952

| Time | * foF2 | h'F1 | foF1 | h'E | foE | fEs | ** (M3000)F2 |
|---|---|---|---|---|---|---|---|
| 00 | 306 3.1 | | | | | | 3.0 |
| 01 | (280) 2.8 | | | | | | |
| 02 | (280) 2.8 | | | | | | |
| 03 | --- --- | | | | | | |
| 04 | 300 3.3 | | | | | | 3.0 |
| 05 | 280 3.6 | | | | | | |
| 06 | 260 4.4 | | | | | | |
| 07 | 240 6.5 | | | | | | |
| 08 | 240 8.2 | | | | | | (3.4) |
| 09 | 260 8.5 | | | | | | |
| 10 | 260 9.0 | | | | | | |
| 11 | 280 9.0 | | | | | | |
| 12 | 280 9.4 | | | | | | (3.1) |
| 13 | 280 10.5 | | | | | | |
| 14 | 270 10.3 | | | | | | |
| 15 | 260 9.7 | | | | | | |
| 16 | 260 9.0 | | | | | | 3.6 |
| 17 | 250 8.3 | | | | | | |
| 18 | 240 6.6 | | | | | | |
| 19 | 245 5.2 | | | | | | |
| 20 | 280 4.0 | | | | | | 3.2 |
| 21 | 280 3.6 | | | | | | |
| 22 | 300 3.3 | | | | | | |
| 23 | 300 3.1 | | | | | | |

Time: Local.
Sweep: 1.8 Mc to 16.0 Mc in 5 minutes, manual operation.
*Height at 0.83 foF2.
**Average values; other columns, median values.

Table 44

Bombay, India (19.0°N, 73.0°E) October 1962

| Time | * foF2 | h'F1 | foF1 | h'E | foE | fEs | ** (M3000)F2 |
|---|---|---|---|---|---|---|---|
| 00 | | | | | | | |
| 01 | | | | | | | |
| 02 | | | | | | | |
| 03 | | | | | | | |
| 04 | | | | | | | |
| 05 | | | | | | | |
| 06 | | | | | | | |
| 07 | 300 6.9 | | | | | | |
| 08 | 330 8.2 | | | | | | 3.0 |
| 09 | 360 8.8 | | | | | | |
| 10 | 390 9.6 | | | | | | |
| 11 | 390 11.1 | | | | | | |
| 12 | 420 11.9 | | | | | | (2.6) |
| 13 | 450 12.8 | | | | | | |
| 14 | (390) 13.0 | | | | | | |
| 16 | --- 13.5 | | | | | | |
| 16 | 406 13.6 | | | | | | (2.5) |
| 17 | 390 12.8 | | | | | | |
| 18 | 390 12.3 | | | | | | |
| 19 | 360 10.5 | | | | | | |
| 20 | 360 9.4 | | | | | | 2.9 |
| 21 | 330 7.8 | | | | | | |
| 22 | 300 6.8 | | | | | | (3.1) |
| 23 | 300 6.0 | | | | | | |

Time: Local.
Sweep: 1.8 Mc to 16.0 Mc in 6 minutes, manual operation.
*Height at 0.83 foF2.
**Average values; other columns, median values.

Table 45

Madras, India (13.0°N, 80.2°E) October 1962

| Time | * foF2 | h'F1 | foF1 | h'E | foE | fEs | ** (M3000)F2 |
|---|---|---|---|---|---|---|---|
| 00 | | | | | | | |
| 01 | | | | | | | |
| 02 | | | | | | | |
| 03 | | | | | | | |
| 04 | | | | | | | |
| 05 | | | | | | | |
| 06 | | | | | | | |
| 07 | 360 6.9 | | | | | | |
| 08 | 360 8.5 | | | | | | (2.7) |
| 09 | 390 9.6 | | | | | | |
| 10 | 420 9.8 | | | | | | |
| 11 | 420 9.3 | | | | | | |
| 12 | 420 9.4 | | | | | | (2.5) |
| 13 | 450 9.9 | | | | | | |
| 14 | 450 10.6 | | | | | | |
| 15 | 420 10.9 | | | | | | |
| 16 | 420 11.2 | | | | | | (2.6) |
| 17 | 420 11.2 | | | | | | |
| 18 | 420 11.1 | | | | | | |
| 19 | 420 10.2 | | | | | | |
| 20 | 390 9.6 | | | | | | (2.6) |
| 21 | 390 8.9 | | | | | | |
| 22 | 360 8.5 | | | | | | |
| 23 | | | | | | | |

Time: Local.
Sweep: 1.8 Mc to 16.0 Mc in 5 minutes, manual operation.
*Height at 0.83 foF2.
**Average values; other columns, median values.

Table 46

Tiruchy, India (10.8°N, 78.8°E) October 1952

| Time | * foF2 | h'F1 | foF1 | h'E | foE | fEs | ** (M3000)F2 |
|---|---|---|---|---|---|---|---|
| 00 | | | | | | | |
| 01 | | | | | | | |
| 02 | | | | | | | |
| 03 | | | | | | | |
| 04 | | | | | | | |
| 05 | | | | | | | |
| 06 | 390 6.3 | | | | | | |
| 07 | 420 7.4 | | | | | | |
| 08 | 450 9.0 | | | | | | 2.4 |
| 09 | 480 9.2 | | | | | | |
| 10 | 480 9.2 | | | | | | |
| 11 | 510 9.2 | | | | | | |
| 12 | 510 9.2 | | | | | | (2.3) |
| 13 | 510 9.2 | | | | | | |
| 14 | 510 9.4 | | | | | | |
| 16 | 510 9.5 | | | | | | |
| 16 | 510 9.5 | | | | | | (2.2) |
| 17 | 510 9.5 | | | | | | |
| 18 | 480 9.5 | | | | | | |
| 19 | 480 9.2 | | | | | | |
| 20 | 480 8.9 | | | | | | (2.3) |
| 21 | 420 8.5 | | | | | | |
| 22 | 420 7.8 | | | | | | |
| 23 | | | | | | | |

Time: Local.
Sweep: 1.8 Mc to 16.0 Mc in 6 minutes, manual operation.
*Height at 0.83 foF2.
**Average values; other columns, median values.

Table 47*

Inverness, Scotland (57.4°N, 4.2°W) August 1952

| Time | h'F2 foF2 | h'F1 | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|
| 00 | 280 (3.5) | | | | | 2.1 | 2.8 |
| 01 | 290 3.0 | | | | | 2.4 | 2.8 |
| 02 | 305 (2.6) | | | | | 2.5 | 2.7 |
| 03 | 305 2.4 | | | | | 1.5 | (2.7) |
| 04 | 285 (2.4) | | | | | 2.7 | (2.8) |
| 05 | 270 3.1 | (250) | | 131 | (1.6) | 3.0 | 3.0 |
| 06 | 320 3.7 | 240 | (3.2) | 114 | 1.8 | 3.0 | 3.2 |
| 07 | 350 4.2 | 220 | 3.4 | 110 | 2.2 | 3.1 | 3.1 |
| 08 | 430 4.6 | 210 | 3.9 | 110 | 2.6 | 3.1 | (3.1) |
| 09 | 380 4.9 | 220 | 4.0 | 110 | 2.8 | 3.6 | 3.1 |
| 10 | 350 5.0 | 210 | 4.2 | 105 | 2.9 | 3.7 | 3.1 |
| 11 | 360 5.0 | 215 | 4.3 | 105 | 3.0 | 3.5 | 3.1 |
| 12 | 370 5.2 | 210 | 4.4 | 110 | 3.0 | 3.3 | 3.0 |
| 13 | 370 6.3 | 210 | 4.4 | 110 | 3.0 | 3.3 | 2.9 |
| 14 | 380 6.2 | 215 | 4.3 | 105 | 3.0 | 3.1 | 3.1 |
| 15 | 385 5.3 | 215 | 4.2 | 105 | 3.0 | 3.1 | 3.0 |
| 16 | 360 6.2 | 220 | 4.2 | 105 | 2.8 | 3.2 | 2.9 |
| 17 | 350 6.4 | 230 | 3.9 | 110 | 2.6 | 3.4 | 3.0 |
| 18 | 305 5.6 | 240 | 3.6 | 115 | 2.2 | 3.3 | 3.0 |
| 19 | 270 5.6 | 240 | 3.0 | 130 | 1.8 | 3.1 | 3.1 |
| 20 | 255 5.8 | | | | (1.7) | 2.7 | 3.0 |
| 21 | 260 5.3 | | | | | 2.4 | 2.9 |
| 22 | 260 4.6 | | | | | 2.6 | 2.9 |
| 23 | 280 (3.8) | | | | | 2.3 | 2.9 |

Time: 0.0°.
Sweep: 0.67 Mc to 25.0 Mc in 5 minutes.
*Average values except foF2 and fEs, which are median values.

Table 48*

Slough, England (51.5°N, 0.6°W) August 1952

| Time | h'F2 foF2 | h'F1 | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|
| 00 | 280 3.8 | | | | | 2.6 | 2.8 |
| 01 | 290 3.6 | | | | | 2.6 | 2.8 |
| 02 | 290 3.1 | | | | | 3.5 | 2.8 |
| 03 | 295 3.2 | | | | | 3.8 | 2.8 |
| 04 | 295 2.9 | | | | | 4.1 | 2.8 |
| 05 | 275 3.5 | 265 | 2.5 | 125 | 1.7 | 3.8 | 3.0 |
| 06 | 300 4.1 | 240 | 3.4 | 125 | 2.0 | 4.5 | 3.1 |
| 07 | 340 4.6 | 235 | 3.8 | 120 | 2.4 | 4.5 | 3.0 |
| 08 | 340 5.0 | 230 | 4.1 | 115 | 2.7 | 4.8 | 3.0 |
| 09 | 360 5.4 | 225 | 4.3 | 115 | 3.0 | 4.8 | 3.1 |
| 10 | 345 5.6 | 220 | 4.4 | 115 | 3.1 | 5.0 | 3.0 |
| 11 | 350 5.4 | 220 | 4.4 | 115 | 3.2 | 6.6 | 3.0 |
| 12 | 380 5.4 | 220 | 4.5 | 115 | 3.2 | 4.8 | 3.0 |
| 13 | 400 5.4 | 220 | 4.6 | 120 | 3.2 | 6.1 | 3.0 |
| 14 | 365 5.5 | 225 | 4.4 | 115 | 3.2 | 4.8 | 3.0 |
| 15 | 360 5.4 | 230 | 4.3 | 115 | 3.1 | 4.7 | 3.0 |
| 16 | 340 6.5 | 225 | 4.2 | 115 | 2.9 | 4.4 | 3.0 |
| 17 | 320 6.6 | 235 | 3.9 | 120 | 2.6 | 4.3 | 3.0 |
| 18 | 295 5.7 | 250 | 3.6 | 125 | 2.1 | 3.9 | 3.0 |
| 19 | 270 6.0 | 250 | 3.2 | 130 | 1.8 | 3.4 | 3.0 |
| 20 | 260 6.5 | | | | | 3.7 | 3.0 |
| 21 | 250 6.0 | | | | | 3.1 | 3.0 |
| 22 | 250 5.0 | | | | | 2.6 | 3.0 |
| 23 | 275 4.4 | | | | | 2.6 | 2.8 |

Time: 0.0°.
Sweep: 0.65 Mc to 16.5 Mc in 5 minutes.
*Average values except foF2 and fEs, which are median values.

Table 49*

Singapore, British Malaya (1.3°N, 103.8°E) August 1952

| Time | h'F2 | foF2 | h'F1 | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|
| 00 | 235 | 5.0 | | | | | 3.0 | 3.1 |
| 01 | 240 | 4.3 | | | | | 3.0 | 3.1 |
| 02 | 240 | 3.8 | | | | | 2.9 | 3.2 |
| 03 | 245 | 2.8 | | | | | 3.0 | 3.2 |
| 04 | 260 | 2.3 | | | | | 3.5 | 3.2 |
| 05 | 270 | 2.0 | | | | | 3.7 | (3.2) |
| 06 | 270 | 3.2 | | | | | 3.2 | 3.0 |
| 07 | 250 | 6.6 | (240) | | 125 | 2.2 | 3.6 | 3.0 |
| 08 | 305 | 8.4 | 225 | | 120 | 2.9 | 4.2 | 2.8 |
| 09 | 315 | 9.6 | 215 | (4.6) | 115 | 3.2 | 5.4 | 2.7 |
| 10 | 335 | 10.3 | 210 | 4.6 | 110 | 3.4 | 5.9 | 2.5 |
| 11 | 340 | 10.4 | 205 | 4.7 | 110 | 3.6 | 6.0 | 2.6 |
| 12 | 340 | 10.1 | 200 | 4.7 | 110 | 3.6 | 5.1 | 2.5 |
| 13 | 345 | 10.2 | 200 | 4.7 | 110 | 3.6 | 5.2 | 2.5 |
| 14 | 340 | 9.8 | 200 | 4.6 | 110 | 3.5 | 5.2 | 2.5 |
| 15 | 335 | 9.6 | 205 | (4.5) | 115 | 3.2 | 5.6 | 2.4 |
| 16 | 315 | 9.6 | 225 | | 115 | 2.9 | | 2.4 |
| 17 | (280) | 9.8 | 240 | | 120 | 2.4 | 3.4 | 2.5 |
| 18 | 255 | 9.9 | | | (145) | 1.8 | 3.0 | 2.7 |
| 19 | 255 | 10.2 | | | | | 3.0 | 2.9 |
| 20 | 250 | 9.6 | | | | | 3.0 | 3.0 |
| 21 | 230 | 9.7 | | | | | 3.0 | 3.2 |
| 22 | 215 | 7.4 | | | | | 3.0 | 3.3 |
| 23 | 220 | 5.8 | | | | | 3.2 | 3.2 |

Time: 105.0°E.
Sweep: 0.67 Mc to 25.0 Mc in 5 minutes.
*Average values except foF2 and fEs, which are median values.

Table 50

Rarotonga I. (21.3°S, 159.8°W) August 1952

| Time | h'F2 | foF2 | h'F1 | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|
| 00 | 280 | 4.0 | | | | | | 3.0 |
| 01 | 270 | 4.0 | | | | | | 3.0 |
| 02 | 260 | 4.0 | | | | | | 3.1 |
| 03 | <270 | 3.6 | | | | | | 3.0 |
| 04 | 280 | 3.3 | | | | | | 3.0 |
| 05 | <300 | 2.9 | | | | | | 2.9 |
| 06 | 300 | 2.7 | | | | | | 2.8 |
| 07 | 250 | 5.2 | <200 | 2.1 | --- | --- | | 3.2 |
| 08 | 250 | 6.8 | 220 | 3.7 | 115 | 2.4 | 3.5 | 3.3 |
| 09 | 280 | 7.4 | 220 | 4.3 | 110 | 2.9 | 3.7 | 3.2 |
| 10 | 270 | 8.0 | 220 | 4.5 | 110 | 3.1 | 4.1 | 3.3 |
| 11 | 270 | 8.0 | 210 | 4.4 | 110 | 3.2 | 4.1 | 3.3 |
| 12 | 270 | 7.0 | 200 | 4.5 | 110 | 3.2 | 4.2 | 3.4 |
| 13 | 280 | 7.1 | 210 | 4.5 | 110 | 3.2 | 4.3 | 3.2 |
| 14 | 290 | 7.2 | 200 | 4.5 | 110 | 3.1 | 4.0 | 3.3 |
| 15 | 290 | 6.8 | 210 | 4.5 | 110 | 3.0 | 3.9 | 3.2 |
| 16 | 280 | 6.9 | 240 | 4.2 | 110 | 2.8 | 3.8 | 3.2 |
| 17 | 260 | 6.9 | 240 | 3.4 | 110 | 2.4 | 3.7 | 3.2 |
| 18 | 250 | 6.3 | --- | --- | | | 3.5 | 3.2 |
| 19 | 250 | 6.0 | | | | | 2.9 | 3.0 |
| 20 | 250 | 5.3 | | | | | 2.7 | 3.0 |
| 21 | <270 | 4.8 | | | | | 2.4 | 2.9 |
| 22 | 290 | 4.7 | | | | | | 2.8 |
| 23 | <280 | 4.2 | | | | | | 2.9 |

Time: 157.5°W.
Sweep: 2.0 Mc to 16.0 Mc, manual operation.

Table 51

Christchurch, New Zealand (43.6°S, 172.7°E) August 1952

| Time | h'F2 | foF2 | h'F1 | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|
| 00 | 280 | 2.6 | | | | | 2.5 | 3.0 |
| 01 | 280 | 2.5 | | | | | 3.2 | 3.0 |
| 02 | 270 | 2.6 | | | | | 2.8 | 3.0 |
| 03 | 270 | 2.4 | | | | | 3.2 | 3.1 |
| 04 | 260 | 2.1 | | | | | 3.1 | 3.2 |
| 05 | 240 | 1.8 | | | | | 3.4 | 3.2 |
| 06 | 270 | 1.8 | | | | | 3.2 | 3.1 |
| 07 | 250 | 3.2 | --- | --- | | 1.4 | 3.4 | 3.4 |
| 08 | 250 | 4.5 | 240 | 3.2 | | 1.9 | 3.4 | 3.5 |
| 09 | 260 | 4.9 | 230 | 3.7 | | 2.3 | | 3.4 |
| 10 | 280 | 5.3 | 220 | 3.9 | | 2.7 | | 3.2 |
| 11 | 290 | 5.5 | 230 | 4.1 | | 2.8 | 4.3 | 3.2 |
| 12 | 300 | 5.7 | 230 | 4.2 | | 2.9 | 4.5 | 3.2 |
| 13 | 300 | 6.0 | 220 | 4.2 | | 2.9 | 4.3 | 3.3 |
| 14 | 280 | 5.8 | 220 | 4.0 | | 2.7 | 4.2 | 3.3 |
| 15 | 260 | 5.6 | 230 | 3.8 | | 2.5 | 4.1 | 3.4 |
| 16 | 260 | 5.5 | 240 | 3.3 | | 2.2 | | 3.3 |
| 17 | 240 | 5.2 | 240 | 2.2 | | 1.4 | 1.5 | 3.3 |
| 18 | 240 | 4.3 | | | | | | 3.1 |
| 19 | 250 | 3.9 | | | | | | 3.0 |
| 20 | 260 | 3.5 | | | | | | 3.0 |
| 21 | 270 | 3.2 | | | | | | 3.0 |
| 22 | 270 | 2.8 | | | | | | 3.0 |
| 23 | 270 | 2.8 | | | | | 2.4 | 3.0 |

Time: 172.5°E.
Sweep: 1.0 Mc to 13.0 Mc in 1 minute 55 seconds.

Table 52*

Khartoum, Sudan (15.6°N, 32.6°E) July 1952

| Time | h'F2 | foF2 | h'F1 | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|
| 00 | 345 | (4.9) | | | | | 4.1 | |
| 01 | 335 | --- | | | | | 2.9 | |
| 02 | 330 | (4.1) | | | | | 3.8 | |
| 03 | 330 | --- | | | | | 2.4 | |
| 04 | 265 | (3.7) | | | | | | |
| 05 | 260 | (3.3) | | | | | 3.9 | |
| 06 | 240 | 5.4 | | | 130 | 1.9 | 4.4 | |
| 07 | 250 | 6.6 | 230 | | 125 | 2.5 | 5.6 | |
| 08 | 290 | 7.2 | (230) | (4.4) | 120 | 3.1 | 4.9 | |
| 09 | 400 | 7.2 | (230) | (4.6) | 120 | 3.5 | 5.4 | |
| 10 | 450 | 7.4 | (210) | 4.6 | 120 | 3.5 | 5.3 | |
| 11 | 500 | 7.5 | (240) | 4.7 | 120 | 3.6 | 4.3 | |
| 12 | 505 | 8.0 | 210 | 4.7 | 120 | 3.7 | 5.2 | |
| 13 | 460 | 8.3 | (205) | 4.6 | 120 | 3.6 | 5.6 | |
| 14 | 430 | 8.5 | 220 | 4.6 | 120 | 3.4 | 5.9 | |
| 15 | 380 | 9.0 | 220 | 4.4 | 120 | 3.3 | 5.6 | |
| 16 | 360 | 9.3 | (220) | 4.2 | 120 | (3.2) | 5.6 | |
| 17 | (400) | 9.4 | | | 120 | 2.5 | 4.9 | |
| 18 | 260 | 9.8 | | | | | 4.4 | |
| 19 | 260 | 9.6 | | | | | 4.7 | |
| 20 | 280 | 7.8 | | | | | 3.9 | |
| 21 | 290 | 7.0 | | | | | 3.9 | |
| 22 | 340 | 6.4 | | | | | 3.9 | |
| 23 | 350 | (5.2) | | | | | 2.6 | |

Time: 30.0 E.
Sweep: 0.67 Mc to 25.0 Mc in 5 minutes.
*Average values except foF2 and fEs, which are median values.

Table 53

Rarotonga I. (21.3°S, 159.8°W) July 1952

| Time | h'F2 | foF2 | h'F1 | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|
| 00 | 280 | 3.2 | | | | | | 2.8 |
| 01 | 270 | 3.0 | | | | | | 2.8 |
| 02 | <300 | 3.2 | | | | | | 2.8 |
| 03 | 270 | 3.3 | | | | | | 2.9 |
| 04 | 240 | 3.1 | | | | | | 3.0 |
| 05 | <260 | 2.9 | | | | | | 3.0 |
| 06 | <280 | 2.5 | | | | | | 2.9 |
| 07 | 250 | 4.6 | --- | 1.9 | | | | 3.2 |
| 08 | 250 | 6.1 | 200 | 3.0 | 115 | 2.3 | 3.0 | 3.3 |
| 09 | 270 | 6.9 | 220 | 4.1 | 110 | 2.7 | 3.5 | 3.3 |
| 10 | 270 | 7.4 | 220 | 4.2 | 110 | 3.0 | 3.8 | 3.4 |
| 11 | 270 | 7.0 | 210 | 4.4 | 110 | 3.1 | 3.9 | 3.5 |
| 12 | 270 | 6.7 | 200 | 4.4 | 110 | 3.2 | 3.9 | 3.3 |
| 13 | 280 | 7.0 | 200 | 4.4 | 110 | 3.1 | 4.0 | 3.2 |
| 14 | 290 | 7.0 | 200 | 4.3 | 110 | 3.1 | 3.9 | 3.2 |
| 15 | 270 | 7.2 | 210 | 4.1 | 110 | 3.0 | 3.5 | 3.2 |
| 16 | 260 | 7.0 | 230 | 4.0 | 110 | 2.7 | 3.5 | 3.3 |
| 17 | 250 | 6.4 | 250 | 3.0 | 120 | 2.2 | 3.3 | 3.2 |
| 18 | 240 | 6.3 | | | | | 3.1 | 3.3 |
| 19 | 230 | 5.1 | | | | | 2.4 | 3.2 |
| 20 | 250 | 3.9 | | | | | | 3.0 |
| 21 | <260 | 3.5 | | | | | | 2.9 |
| 22 | <270 | 3.4 | | | | | | 2.9 |
| 23 | <280 | 3.3 | | | | | | 2.9 |

Time: 157.5°W.
Sweep: 2.0 Mc to 16.0 Mc, manual operation.

Table 54

Christchurch, N.Z. (43.6°S, 172.7°E) July 1952

| Time | h'F2 | foF2 | h'F1 | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|
| 00 | 280 | 2.2 | | | | | 3.3 | 3.1 |
| 01 | 280 | 2.2 | | | | | 3.4 | 3.0 |
| 02 | 280 | 2.2 | | | | | 2.9 | 3.0 |
| 03 | 270 | 2.2 | | | | | 3.2 | 3.0 |
| 04 | 250 | 2.0 | | | | | 3.3 | 3.2 |
| 05 | 240 | 1.8 | | | | | 3.5 | 3.3 |
| 06 | (230) | 1.6 | | | | | 3.5 | 3.3 |
| 07 | 270 | 2.2 | | | | --- | 3.6 | 3.2 |
| 08 | 240 | 3.8 | | | | 1.5 | 4.0 | 3.6 |
| 09 | 240 | 4.6 | 240 | 3.2 | | 2.2 | 3.4 | 3.5 |
| 10 | 260 | 5.1 | 230 | 3.5 | | 2.4 | 4.3 | 3.4 |
| 11 | 280 | 5.5 | 230 | 3.8 | | 2.6 | 4.4 | 3.4 |
| 12 | 270 | 5.8 | 230 | 3.9 | | 2.7 | 4.5 | 3.3 |
| 13 | 270 | 5.8 | 230 | 3.8 | | 2.7 | 4.4 | 3.4 |
| 14 | 260 | 5.8 | 240 | 3.7 | | 2.5 | 4.4 | 3.4 |
| 15 | 260 | 5.4 | 240 | 3.3 | | 2.2 | 4.4 | 3.4 |
| 16 | 240 | 5.4 | 240 | 2.4 | | 1.8 | 3.5 | 3.5 |
| 17 | 230 | 4.4 | | | | --- | 3.6 | 3.3 |
| 18 | 250 | 3.7 | | | | | 3.2 | 3.1 |
| 19 | 260 | 3.3 | | | | | 2.5 | 3.1 |
| 20 | 270 | 2.9 | | | | | 1.9 | 3.1 |
| 21 | 270 | 2.4 | | | | | | 3.1 |
| 22 | 280 | 2.3 | | | | | | 3.0 |
| 23 | 290 | 2.3 | | | | | 3.3 | 3.0 |

Time: 172.5°E.
Sweep: 1.0 Mc to 13.0 Mc in 1 minute 55 seconds.

Table 55*

Falkland Is. (51.7°S, 57.8°W) July 1952

| Time | h'F2 | foF2 | h'F1 | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|
| 00 | 310 | 2.6 | | | | | 3.0 | 2.9 |
| 01 | 315 | 2.6 | | | | | 2.3 | 2.8 |
| 02 | 295 | 2.5 | | | | | | 2.9 |
| 03 | 285 | 2.6 | | | | | | 2.9 |
| 04 | 280 | 2.5 | | | | | | 2.9 |
| 05 | 265 | 2.4 | | | | | | 3.2 |
| 06 | 225 | 2.2 | | | | | | 3.4 |
| 07 | 260 | 2.2 | | | | (1.4) | | (3.1) |
| 08 | 220 | 3.9 | | | (160) | (1.9) | 4.2 | 3.5 |
| 09 | 220 | 4.7 | | | (140) | | 4.9 | 3.7 |
| 10 | 220 | 4.9 | | | (130) | | 4.0 | 3.7 |
| 11 | 230 | 5.5 | (215) | (3.3) | (120) | | 4.0 | 3.6 |
| 12 | 230 | 6.0 | (220) | (3.4) | (120) | | 4.6 | 3.7 |
| 13 | 230 | 6.0 | (225) | (3.4) | (120) | | 5.0 | 3.7 |
| 14 | 230 | 5.6 | (230) | (3.1) | | | 4.8 | 3.7 |
| 15 | 220 | 5.0 | | | | | 4.9 | 3.7 |
| 16 | 215 | 4.5 | | | | | 4.8 | 3.7 |
| 17 | 220 | 3.3 | | | | | 3.0 | (3.0) |
| 18 | 245 | 2.8 | | | | | 3.0 | 3.2 |
| 19 | 245 | 2.8 | | | | | 2.9 | 3.2 |
| 20 | 260 | 2.6 | | | | | 3.0 | 3.2 |
| 21 | 270 | 2.5 | | | | | 2.9 | 3.0 |
| 22 | 280 | 2.6 | | | | | 2.9 | 2.9 |
| 23 | 305 | 2.6 | | | | | 2.9 | 2.9 |

Time: 60.0°W.
Sweep: 0.67 Mc to 25.0 Mc in 5 minutes.
*Average values except foF2 and fEs, which are median values.

Table 56*

Port Lockroy (64.8°S, 63.5°W) July 1952

| Time | h'F2 | foF2 | h'F1 | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|
| 00 | 300 | 2.2 | | | | | | 2.9 |
| 01 | 295 | 2.3 | | | | | | 2.8 |
| 02 | 295 | 2.4 | | | | | | 2.8 |
| 03 | 295 | 2.4 | | | | | | 2.8 |
| 04 | 285 | 2.4 | | | | | | 2.8 |
| 05 | 255 | 2.2 | | | | | | 3.0 |
| 06 | 245 | 2.2 | | | | | | 3.2 |
| 07 | (235) | 1.8 | | | | | | |
| 08 | (235) | 1.8 | | | | | | (3.3) |
| 09 | 235 | 2.9 | | | | | 1.9 | 3.2 |
| 10 | 215 | 4.4 | | | | | 3.1 | (3.3) |
| 11 | 215 | 4.5 | | | | | 4.3 | (3.6) |
| 12 | 220 | 4.6 | | | | | 3.6 | (3.5) |
| 13 | 220 | 4.9 | | | | | | (3.4) |
| 14 | 215 | 4.5 | | | | | | 3.5 |
| 15 | 215 | 4.2 | | | | | | 3.4 |
| 16 | 220 | 3.8 | | | | | | (3.2) |
| 17 | 215 | 3.0 | | | | | | 3.2 |
| 18 | 230 | 2.2 | | | | | | 3.2 |
| 19 | 260 | 1.9 | | | | | | 3.0 |
| 20 | (275) | 1.8 | | | | | | (2.9) |
| 21 | (290) | 2.0 | | | | | | 2.9 |
| 22 | (290) | 2.0 | | | | | | 2.8 |
| 23 | 285 | 2.2 | | | | | | 2.8 |

Time: 60.0°W.
Sweep: 1.1 Mc to 16.0 Mc, manual operation.
*Average values except foF2 and fEs, which are median values.

Table 57*

Khartoum, Sudan (15.6°N, 32.6°E) June 1952

| Time | h'F2 | foF2 | h'F1 | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|
| 00 | 415 | (4.3) | | | | | | |
| 01 | 415 | (3.8) | | | | | | |
| 02 | 385 | (3.4) | | | | | | |
| 03 | 375 | (4.8) | | | | | 2.0 | |
| 04 | 335 | (3.6) | | | | | 1.9 | |
| 05 | 285 | 3.4 | | | | | 5.5 | |
| 06 | 255 | 5.6 | | | 117 | 2.0 | 4.1 | |
| 07 | 255 | 6.9 | 228 | 4.0 | 111 | 2.6 | 5.8 | |
| 08 | 280 | 7.8 | 227 | 4.4 | 112 | 3.0 | 5.8 | |
| 09 | 310 | 8.0 | 218 | 4.6 | 112 | 3.3 | 5.6 | |
| 10 | 345 | 7.8 | 214 | 4.7 | 111 | 3.4 | 5.6 | |
| 11 | 345 | 8.0 | 210 | 4.7 | 111 | 3.5 | 5.8 | |
| 12 | 325 | 8.3 | 217 | 4.7 | 112 | 3.6 | 5.4 | |
| 13 | 310 | 8.5 | 210 | 4.7 | 112 | 3.5 | 5.9 | |
| 14 | 310 | 8.7 | 216 | 4.6 | 113 | 3.4 | 6.5 | |
| 15 | 310 | 9.4 | 218 | 4.5 | 112 | 3.2 | 5.9 | |
| 16 | 305 | 9.8 | 225 | 4.3 | 114 | 3.0 | 5.7 | |
| 17 | 265 | 10.0 | 236 | 3.9 | | | 5.4 | |
| 18 | 245 | 10.1 | | | | | 5.8 | |
| 19 | 260 | 9.4 | | | | | 5.0 | |
| 20 | 310 | 8.3 | | | | | 3.5 | |
| 21 | 340 | 7.3 | | | | | 3.0 | |
| 22 | 375 | 6.0 | | | | | 2.6 | |
| 23 | 405 | (4.2) | | | | | 2.5 | |

Time: 30.0°E.
Sweep: 0.67 Mc to 25.0 Mc in 5 minutes.
*Average values except foF2 and fEs, which are median values.

Table 58

Macquarie I. (54.5°S, 159.0°E) March 1952

| Time | h'F2 | foF2 | h'F1 | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|
| 00 | --- | --- | | | | | 5.0 | --- |
| 01 | --- | --- | | | | | 4.2 | --- |
| 02 | --- | --- | | | | | 5.2 | --- |
| 03 | --- | --- | | | | | 3.9 | --- |
| 04 | (285) | (2.2) | | | | | 4.0 | (2.9) |
| 05 | (265) | (2.4) | | | | | 1.7 | (3.1) |
| 06 | 250 | 3.3 | | | 150 | 1.8 | | 3.3 |
| 07 | 250 | 4.0 | --- | --- | 100 | 2.2 | | 3.3 |
| 08 | 305 | 4.6 | 225 | 3.7 | 100 | 2.5 | | 3.2 |
| 09 | 350 | 4.9 | 220 | 3.9 | 100 | --- | | 3.1 |
| 10 | 320 | 5.3 | 220 | 4.1 | 100 | 2.9 | | 3.2 |
| 11 | 320 | 5.6 | 220 | 4.2 | 100 | 3.0 | | 3.2 |
| 12 | 300 | 5.6 | 210 | 4.2 | --- | --- | | 3.2 |
| 13 | 310 | 5.6 | 215 | 4.2 | 100 | 3.0 | | 3.1 |
| 14 | 330 | 5.5 | 220 | 4.1 | 100 | 3.0 | | 3.1 |
| 15 | 295 | 5.9 | 220 | 3.9 | 100 | 2.8 | | 3.2 |
| 16 | 270 | 5.6 | 225 | 3.7 | 110 | 2.6 | | 3.2 |
| 17 | 290 | 5.2 | 240 | 3.6 | 110 | 2.4 | 3.8 | 3.2 |
| 18 | 250 | 5.5 | | | --- | --- | 2.8 | 3.2 |
| 19 | (255) | 4.6 | | | | | 4.6 | 3.2 |
| 20 | 270 | 4.5 | | | | | 5.1 | 3.1 |
| 21 | (260) | (3.7) | | | | | 4.8 | (3.0) |
| 22 | --- | --- | | | | | 5.5 | --- |
| 23 | --- | --- | | | | | 5.3 | --- |

Time: 157.5°E.
Sweep: 1.0 Mc to 13.0 Mc in 1 minute 55 seconds.

Table 59

Macquarie I. (54.5°S, 159.0°E) February 1952

| Time | h'F2 | foF2 | h'F1 | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|
| 00 | --- | (4.4) | | | | | 5.2 | (2.9) |
| 01 | (295) | --- | | | | | 4.8 | --- |
| 02 | (280) | 3.6 | | | | | 4.7 | 3.0 |
| 03 | (270) | (3.1) | | | | | 4.0 | (3.1) |
| 04 | (295) | 2.6 | | | | | 3.8 | 3.0 |
| 05 | 250 | 3.3 | | | | | 2.9 | 3.2 |
| 06 | 240 | 4.1 | --- | --- | 105 | 2.2 | 2.8 | 3.3 |
| 07 | 255 | 4.7 | 230 | 3.9 | --- | --- | 3.0 | 3.3 |
| 08 | 310 | 5.0 | 220 | 4.1 | --- | --- | 3.1 | 3.2 |
| 09 | 320 | 5.5 | 210 | 4.2 | 100 | 2.9 | 3.2 | 3.2 |
| 10 | 320 | 5.6 | 200 | 4.3 | 100 | --- | 3.2 | 3.1 |
| 11 | 330 | 5.8 | 200 | 4.4 | 100 | 3.2 | | 3.0 |
| 12 | 330 | 6.0 | 200 | 4.4 | 100 | 3.2 | | 3.0 |
| 13 | 315 | 6.0 | 200 | 4.4 | 100 | 3.3 | | 3.1 |
| 14 | 330 | 6.1 | 200 | 4.3 | 100 | 3.2 | | 3.1 |
| 15 | 325 | 6.0 | 210 | 4.3 | 100 | 2.9 | | 3.0 |
| 16 | 300 | 5.9 | 220 | 4.1 | 100 | 2.8 | 3.0 | 3.1 |
| 17 | 290 | 5.8 | 220 | 3.9 | 100 | 2.6 | 4.0 | 3.0 |
| 18 | 260 | 5.9 | 235 | --- | --- | --- | 4.3 | 3.1 |
| 19 | 260 | 5.0 | --- | --- | --- | --- | 4.0 | 3.1 |
| 20 | 255 | 4.4 | | | | | 5.1 | 3.0 |
| 21 | (260) | 4.6 | | | | | 4.8 | 3.0 |
| 22 | 270 | 4.6 | | | | | 4.8 | 3.1 |
| 23 | (300) | (4.4) | | | | | 5.0 | (3.0) |

Time: 157.5°E.
Sweep: 1.0 Mc to 13.0 Mc in 1 minute 55 seconds.

Table 60

Godhavn, Greenland (69.2°N, 53.5°W) January 1952

| Time | h'F2 | foF2 | h'F1 | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|
| 00 | 250 | (2.5) | | | | | 4.2 | (3.0) |
| 01 | 260 | (2.5) | | | | | 4.2 | (3.1) |
| 02 | (260) | (2.4) | | | | | 4.0 | (3.1) |
| 03 | --- | --- | | | | | 4.6 | --- |
| 04 | --- | --- | | | | | 4.8 | --- |
| 05 | --- | --- | | | | | 5.2 | --- |
| 06 | --- | --- | | | | | 5.3 | --- |
| 07 | --- | --- | | | | | 5.1 | --- |
| 08 | --- | --- | | | | | 4.4 | --- |
| 09 | (290) | (2.8) | | | | | 4.3 | --- |
| 10 | <250 | (3.3) | | | | | 3.8 | (3.2) |
| 11 | 250 | (4.4) | | | | | 4.0 | (3.2) |
| 12 | 250 | (4.2) | | | | | 3.0 | (3.2) |
| 13 | (260) | (4.1) | | | | | 2.0 | (3.2) |
| 14 | 240 | (4.2) | | | | | 3.6 | (3.3) |
| 15 | 240 | (3.6) | | | | | 3.2 | (3.2) |
| 16 | 250 | (3.6) | | | | | 4.6 | (3.1) |
| 17 | 230 | (3.6) | | | | | 4.2 | (3.1) |
| 18 | (240) | (3.4) | | | | | 4.1 | (3.1) |
| 19 | (240) | (3.4) | | | | | 3.8 | (3.1) |
| 20 | <240 | (3.0) | | | | | 3.8 | (3.2) |
| 21 | (240) | (3.0) | | | | | 3.9 | (3.1) |
| 22 | 240 | (2.8) | | | | | 4.6 | (3.1) |
| 23 | <250 | (2.6) | | | | | 3.9 | (3.2) |

Time: 45.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 18 seconds.

Table 61

Macquarie I. (54.5°S, 159.0°E) January 1952

| Time | h'F2 | foF2 | h'F1 | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|
| 00 | (300) | 3.9 | | | | | 5.5 | 2.9 |
| 01 | 300 | (3.6) | | | | | 5.0 | (3.0) |
| 02 | (295) | 3.4 | | | | | 5.0 | 3.0 |
| 03 | (295) | 3.3 | | | | | 4.7 | 3.0 |
| 04 | (260) | 3.3 | | | --- | --- | 3.0 | 3.1 |
| 05 | 240 | 3.6 | --- | --- | 100 | 2.1 | 2.8 | 3.1 |
| 06 | 350 | 4.2 | 235 | 3.7 | 100 | 2.6 | 2.8 | 3.2 |
| 07 | 370 | 4.6 | 220 | 3.9 | 100 | 2.8 | 3.0 | 3.1 |
| 08 | 360 | 4.8 | 200 | 4.2 | 100 | 3.0 | 3.5 | 3.0 |
| 09 | 400 | 4.9 | 200 | 4.4 | 100 | 3.3 | 3.5 | 2.8 |
| 10 | 410 | 5.0 | 200 | 4.4 | 100 | 3.4 | 3.7 | 2.9 |
| 11 | 410 | 5.1 | 200 | 4.5 | 100 | 3.4 | 3.7 | 2.9 |
| 12 | 395 | 5.2 | 200 | 4.5 | 100 | 3.4 | 3.6 | 2.9 |
| 13 | 390 | 5.4 | 200 | 4.5 | 100 | 3.4 | 3.5 | 2.9 |
| 14 | 365 | 5.5 | 200 | 4.5 | 100 | 3.3 | 3.5 | 2.9 |
| 15 | 360 | 5.6 | 200 | 4.4 | 100 | 3.3 | 3.4 | 2.9 |
| 16 | 340 | 5.6 | 200 | 4.3 | 100 | 3.1 | 3.5 | 3.0 |
| 17 | 320 | 5.9 | 220 | 4.1 | 100 | 2.9 | 3.6 | 3.1 |
| 18 | 300 | 5.4 | 225 | 3.8 | 100 | 2.5 | 3.9 | 3.1 |
| 19 | 265 | 5.2 | 245 | 3.4 | 100 | 2.2 | 4.3 | 3.0 |
| 20 | 250 | 5.2 | | | | | 3.8 | 3.1 |
| 21 | 260 | 4.7 | | | | | >4.7 | 3.1 |
| 22 | (260) | 4.7 | | | | | 5.1 | 3.0 |
| 23 | (290) | (4.4) | | | | | >5.2 | (2.9) |

Time: 157.5°E.
Sweep: 1.0 Mc to 13.0 Mc in 1 minute 55 seconds.

Table 62

Macquarie I. (54.5°S, 159.0°E) December 1951

| Time | h'F2 | foF2 | h'F1 | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|
| 00 | (300) | (4.7) | | | | | 5.0 | (3.0) |
| 01 | (270) | (4.0) | | | | | 5.0 | (3.1) |
| 02 | (260) | (3.8) | | | | | 5.2 | (3.2) |
| 03 | (260) | 3.8 | | | | | 4.0 | 3.2 |
| 04 | (250) | 3.9 | | | --- | --- | 4.0 | 3.2 |
| 05 | 240 | 4.5 | --- | --- | 100 | 2.3 | 2.8 | 3.2 |
| 06 | 295 | 5.0 | 220 | 4.0 | 100 | 2.6 | 3.2 | 3.1 |
| 07 | 330 | 5.3 | 215 | 4.2 | 100 | 2.9 | 3.2 | 3.1 |
| 08 | 330 | 5.8 | 210 | 4.4 | 100 | 3.2 | 3.5 | 3.1 |
| 09 | 345 | 6.0 | 200 | 4.6 | 100 | 3.2 | 3.9 | 3.0 |
| 10 | 335 | 6.1 | 200 | 4.6 | 100 | 3.3 | 3.5 | 3.1 |
| 11 | 340 | 6.1 | 200 | 4.7 | 100 | 3.4 | 3.6 | 3.0 |
| 12 | 345 | 6.2 | 200 | 4.7 | 100 | 3.4 | 3.5 | 3.0 |
| 13 | 340 | 6.2 | 200 | 4.6 | 100 | 3.5 | | 3.0 |
| 14 | 340 | 6.2 | 200 | 4.6 | 100 | 3.4 | 3.3 | 3.0 |
| 15 | 330 | 6.4 | 210 | 4.5 | 100 | 3.2 | 3.4 | 3.0 |
| 16 | 330 | 6.4 | 215 | 4.4 | 100 | 3.2 | 3.5 | 2.9 |
| 17 | 310 | 6.5 | 220 | 4.1 | --- | --- | 4.0 | 3.0 |
| 18 | 305 | 6.0 | --- | 3.8 | --- | --- | 5.4 | 3.0 |
| 19 | 270 | 5.1 | --- | 3.2 | --- | --- | 4.7 | 3.1 |
| 20 | (260) | 5.2 | | | | | 5.2 | 3.2 |
| 21 | (240) | (4.8) | | | | | 4.4 | (3.0) |
| 22 | (270) | (4.8) | | | | | 5.2 | (3.0) |
| 23 | --- | 4.5 | | | | | 5.0 | 2.9 |

Time: 157.5°E.
Sweep: 1.0 Mc to 13.0 Mc in 1 minute 55 seconds.

Table 63

Godhavn, Greenland (69.2°N, 53.5°W) November 1951

| Time | h'F2 | foF2 | h'F1 | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|
| 00 | 270 | (3.1) | | | | | 3.6 | (2.8) |
| 01 | (270) | (3.0) | | | | | 4.0 | (2.8) |
| 02 | (280) | (2.8) | | | | | 3.4 | (2.7) |
| 03 | (290) | (3.1) | | | | | 2.8 | (2.8) |
| 04 | (280) | (3.1) | | | | | 3.8 | (2.8) |
| 05 | (260) | (3.2) | | | | | 4.2 | (2.9) |
| 06 | --- | (3.5) | | | | | 3.6 | (2.8) |
| 07 | (260) | (3.0) | | | | | 3.9 | (2.8) |
| 08 | (270) | (3.4) | | | | | 3.0 | (2.8) |
| 09 | 270 | (4.1) | | | | | 3.5 | (2.8) |
| 10 | 260 | (4.6) | | | | | 1.8 | (3.1) |
| 11 | (250) | (5.2) | | | | | | (3.1) |
| 12 | 240 | (5.0) | | | | | | (3.1) |
| 13 | 240 | (5.0) | | | | | 3.5 | (3.2) |
| 14 | (250) | (4.6) | | | | | 4.5 | (3.1) |
| 15 | 250 | (4.4) | | | | | 5.0 | (3.1) |
| 16 | 240 | (4.1) | | | | | 5.2 | (3.1) |
| 17 | 250 | (4.2) | | | | | 3.8 | (3.0) |
| 18 | (250) | (4.2) | | | | | 3.6 | 3.0 |
| 19 | (250) | (4.0) | | | | | 4.1 | (2.9) |
| 20 | (240) | (3.7) | | | | | 4.1 | (2.9) |
| 21 | (240) | (3.8) | | | | | 4.3 | (3.0) |
| 22 | (250) | (3.8) | | | | | 4.7 | (2.9) |
| 23 | (270) | (3.3) | | | | | 3.7 | (3.0) |

Time: 45.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 18 seconds.

Table 64

Macquarie I. (54.5°S, 159.0°E) November 1951

| Time | h'F2 | foF2 | h'F1 | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|
| 00 | (295) | 4.3 | | | | | 5.3 | 2.9 |
| 01 | 295 | 3.9 | | | | | 4.1 | 3.0 |
| 02 | 265 | 3.8 | | | | | 4.2 | 3.0 |
| 03 | 260 | 3.4 | | | | | 4.0 | 3.0 |
| 04 | 260 | 3.9 | | | --- | E | 3.3 | 3.2 |
| 05 | 240 | 4.4 | --- | --- | 100 | 2.2 | 2.4 | 3.2 |
| 06 | 250 | 4.6 | 225 | 3.8 | 100 | 2.6 | 3.3 | 3.2 |
| 07 | 365 | 5.0 | 220 | 4.2 | 100 | 2.8 | | 3.0 |
| 08 | 355 | 5.5 | 210 | 4.4 | 100 | 3.1 | 3.3 | 3.0 |
| 09 | 350 | 5.8 | 210 | 4.5 | 100 | 3.2 | 3.3 | 3.1 |
| 10 | 350 | 6.0 | 200 | 4.6 | 100 | 3.3 | 3.4 | 3.0 |
| 11 | 350 | 6.1 | 210 | 4.7 | 100 | 3.4 | | 3.0 |
| 12 | 340 | 6.3 | 200 | 4.7 | 100 | 3.4 | | 3.0 |
| 13 | 350 | 6.5 | 200 | 4.7 | 100 | 3.4 | | 2.9 |
| 14 | 340 | 6.5 | 200 | 4.6 | 100 | 3.3 | | 3.0 |
| 15 | 320 | 6.5 | 200 | 4.5 | 100 | 3.2 | | 3.0 |
| 16 | 320 | 6.5 | 220 | 4.3 | 100 | 3.0 | 3.3 | 3.0 |
| 17 | 300 | 6.4 | 230 | 4.0 | 100 | 2.8 | 3.4 | 3.0 |
| 18 | 260 | 6.7 | 230 | 3.6 | 100 | 2.3 | 4.6 | 3.0 |
| 19 | 260 | 5.8 | | | --- | --- | 3.5 | 3.0 |
| 20 | 260 | 5.4 | | | | | 4.2 | 3.0 |
| 21 | 270 | 5.6 | | | | | 4.5 | 3.0 |
| 22 | (265) | (5.2) | | | | | 5.0 | (3.0) |
| 23 | (280) | (4.7) | | | | | 5.0 | (3.0) |

Time: 157.5°E.
Sweep: 1.0 Mc to 13.0 Mc in 1 minute 55 seconds.

Table 65

Macquarie I. (54.5°S, 159.0°E) October 1951

| Time | h'F2 | foF2 | h'F1 | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|
| 00 | 300 | 3.2 | | | | | 4.3 | 2.9 |
| 01 | (270) | 3.2 | | | | | 3.9 | 3.0 |
| 02 | 290 | 3.0 | | | | | 3.3 | 2.9 |
| 03 | 270 | 2.7 | | | | | 2.3 | 3.0 |
| 04 | 280 | 2.8 | | | | | 1.4 | 3.0 |
| 05 | 260 | 3.8 | | | --- | E | | 3.1 |
| 06 | 240 | 4.3 | --- | --- | 100 | 2.3 | | 3.2 |
| 07 | 310 | 4.8 | 220 | 4.0 | 100 | 2.6 | 2.7 | 3.1 |
| 08 | 330 | 4.9 | 220 | 4.2 | 100 | 2.9 | | 3.1 |
| 09 | 345 | 5.3 | 210 | 4.3 | 100 | 3.1 | | 3.1 |
| 10 | 360 | 5.4 | 210 | 4.4 | 100 | 3.2 | | 3.0 |
| 11 | 330 | 5.8 | 200 | 4.5 | 100 | 3.2 | | 3.1 |
| 12 | 330 | 6.2 | 200 | 4.5 | 100 | 3.2 | | 3.0 |
| 13 | 310 | 6.2 | 200 | 4.4 | 100 | 3.2 | 3.2 | 3.1 |
| 14 | 320 | 6.0 | 210 | 4.3 | 100 | 3.1 | | 3.0 |
| 15 | 300 | 6.1 | 210 | 4.2 | 100 | 3.0 | | 3.0 |
| 16 | 300 | 6.1 | 220 | 4.0 | 100 | 2.6 | 3.0 | 3.0 |
| 17 | 240 | 6.4 | 240 | 3.5 | 100 | 2.4 | 3.2 | 3.1 |
| 18 | 250 | 6.4 | | | --- | --- | 3.0 | 3.0 |
| 19 | 250 | 5.8 | | | --- | --- | 3.5 | 3.0 |
| 20 | 250 | 5.0 | | | | | >4.4 | 3.0 |
| 21 | (250) | (4.6) | | | | | >4.4 | (3.0) |
| 22 | (260) | (4.0) | | | | | >4.4 | (3.0) |
| 23 | 280 | 4.1 | | | | | 4.0 | 3.0 |

Time: 157.5°E.
Sweep: 1.0 Mc to 13.0 Mc in 1 minute 55 seconds.

Table 66

Macquarie I. (54.5°S, 159.0°E) September 1951

| Time | h'F2 | foF2 | h'F1 | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|
| 00 | --- | (2.5) | | | | | 3.0 | (2.9) |
| 01 | --- | (2.1) | | | | | 4.5 | (2.8) |
| 02 | --- | --- | | | | | 4.5 | --- |
| 03 | --- | (1.8) | | | | | 3.9 | (3.0) |
| 04 | --- | (1.7) | | | | | 3.2 | (3.0) |
| 05 | (280) | (2.1) | | | | | 2.1 | (3.1) |
| 06 | 280 | 3.3 | | | --- | E | | 3.1 |
| 07 | 250 | 4.1 | --- | --- | 100 | 2.0 | | 3.3 |
| 08 | 240 | 4.3 | 230 | --- | 100 | 2.5 | | 3.2 |
| 09 | 310 | 5.0 | 220 | 4.1 | 100 | 2.8 | | 3.2 |
| 10 | 370 | 5.2 | 220 | 4.2 | 100 | 3.0 | | 3.0 |
| 11 | 330 | 5.4 | 220 | 4.2 | 100 | 3.2 | | 3.1 |
| 12 | 320 | 5.6 | 220 | 4.2 | 100 | 3.1 | | 3.0 |
| 13 | 320 | 6.0 | 210 | 4.2 | 100 | 3.1 | | 3.1 |
| 14 | 310 | 6.0 | 210 | 4.1 | 100 | 3.0 | | 3.1 |
| 15 | 315 | 5.8 | 220 | 4.0 | 100 | 2.7 | 2.8 | 3.0 |
| 16 | 250 | 5.8 | 220 | 3.6 | 100 | 2.3 | 2.6 | 3.2 |
| 17 | 245 | 5.5 | --- | --- | 130 | 2.0 | 3.5 | 3.2 |
| 18 | 245 | 5.0 | | | | | 4.4 | 3.2 |
| 19 | 260 | 4.2 | | | | | 4.8 | 3.1 |
| 20 | (250) | 4.2 | | | | | 4.7 | 3.1 |
| 21 | (290) | (3.7) | | | | | 4.8 | (3.1) |
| 22 | (285) | (3.3) | | | | | 4.4 | (3.0) |
| 23 | --- | (3.0) | | | | | 4.8 | (2.9) |

Time: 157.5°E.
Sweep: 1.0 Mc to 13.0 Mc in 1 minute 55 seconds.

Table 67

Macquarie I. (54.5°S, 169.0°E) August 1951

| Time | h'F2 | foF2 | h'F1 | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|
| 00 | (320) | (3.0) | | | | | 4.4 | (3.0) |
| 01 | — | (2.8) | | | | | 4.8 | (3.0) |
| 02 | (280) | (3.5) | | | | | 4.1 | (3.0) |
| 03 | (270) | (3.2) | | | | | 3.9 | (3.1) |
| 04 | — | (2.5) | | | | | 3.6 | (3.1) |
| 05 | (290) | 2.6 | | | | | 2.7 | 3.1 |
| 06 | 280 | 2.1 | | | | | 2.8 | 3.2 |
| 07 | 250 | 3.0 | | | — | — | 2.1 | 3.2 |
| 08 | 240 | 4.2 | | | 100 | 2.0 | | 3.4 |
| 09 | 220 | 4.8 | — | — | 100 | 2.4 | | 3.4 |
| 10 | 255 | 5.2 | 210 | 3.7 | 100 | 2.6 | | 3.4 |
| 11 | 280 | 5.4 | 216 | 4.0 | 110 | 2.8 | | 3.2 |
| 12 | 300 | 5.4 | 210 | 4.0 | 100 | 2.9 | | 3.2 |
| 13 | 280 | 5.8 | 215 | 4.0 | 105 | 2.8 | | 3.2 |
| 14 | 280 | 5.7 | 220 | 3.8 | 110 | 2.7 | | 3.2 |
| 15 | 240 | 5.8 | — | 3.5 | 110 | 2.4 | | 3.3 |
| 16 | 230 | 5.5 | | | 110 | 2.0 | | 3.3 |
| 17 | 245 | 4.4 | | | — | — | 2.0 | 3.2 |
| 18 | 250 | 4.4 | | | | | 2.2 | 3.0 |
| 19 | 290 | 4.0 | | | | | 3.9 | 3.1 |
| 20 | (280) | 3.3 | | | | | 4.4 | 3.0 |
| 21 | (280) | (3.2) | | | | | 4.2 | (3.1) |
| 22 | (280) | (2.6) | | | | | 4.8 | (3.0) |
| 23 | — | — | | | | | 4.8 | — |

Time: 157.5°E.
Sweep: 1.0 Mc to 13.0 Mc in 1 minute 55 seconds.

Table 68

Macquarie I. (54.5°S, 159.0°E) July 1961*

| Time | h'F2 | foF2 | h'F1 | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|
| 00 | (270) | 3.1 | | | | | 4.4 | (3.0) |
| 01 | (300) | (2.8) | | | | | 4.7 | (3.0) |
| 02 | (300) | 2.8 | | | | | 4.2 | 2.9 |
| 03 | (280) | 2.6 | | | | | 2.2 | 3.0 |
| 04 | (270) | 2.6 | | | | | 3.9 | 3.1 |
| 05 | (260) | (2.4) | | | | | 3.4 | (3.2) |
| 06 | 250 | 2.6 | | | | | 2.0 | 3.2 |
| 07 | (255) | (2.0) | | | | | | (3.2) |
| 08 | (230) | (3.9) | | | — | — | (2.0) | (3.4) |
| 09 | (220) | 5.3 | | | — | 2.1 | 2.5 | 3.5 |
| 10 | 220 | 6.0 | | | 100 | 2.4 | (2.7) | 3.5 |
| 11 | 220 | 6.6 | | | 100 | 2.5 | (2.7) | 3.5 |
| 12 | (230) | (7.2) | | | 100 | 2.6 | | (3.4) |
| 13 | (220) | (7.2) | | | 100 | 2.6 | | (3.4) |
| 14 | (220) | (7.2) | | | — | — | | (3.4) |
| 15 | 225 | (7.5) | | | — | — | | (3.5) |
| 16 | (220) | (6.8) | | | — | — | (1.9) | (3.4) |
| 17 | 220 | 5.8 | | | | | | 3.2 |
| 18 | — | — | | | | | | — |
| 19 | (270) | (3.3) | | | | | 2.3 | (3.0) |
| 20 | (250) | (3.0) | | | | | 3.6 | (3.0) |
| 21 | (260) | (2.8) | | | | | 4.1 | (3.0) |
| 22 | (290) | (2.9) | | | | | 4.4 | (3.0) |
| 23 | — | (2.6) | | | | | 5.2 | (2.9) |

Time: 157.5°E.
Sweep: 1.0 Mc to 13.0 Mc in 1 minute 55 seconds.
*No record from 21st through 30th.

Table 69

Macquarie I. (54.5°S, 159.0°E) June 1951

| Time | h'F2 | foF2 | h'F1 | foF1 | h'E | foE | fEs | (M3000)F2 |
|---|---|---|---|---|---|---|---|---|
| 00 | (280) | (3.0) | | | | | 4.2 | (3.0) |
| 01 | (270) | (2.9) | | | | | 4.4 | (3.0) |
| 02 | (290) | (2.8) | | | | | 3.7 | (2.9) |
| 03 | (270) | 3.0 | | | | | 4.0 | (3.0) |
| 04 | (260) | 2.8 | | | | | 4.0 | 3.0 |
| 05 | (280) | 2.5 | | | | | 3.3 | 3.0 |
| 06 | (270) | 2.2 | | | | | 1.8 | 3.1 |
| 07 | (260) | 2.1 | | | | | 2.4 | 3.2 |
| 08 | 240 | 3.5 | | | — | 1.4 | 2.2 | 3.4 |
| 09 | 230 | 4.7 | | | 100 | 2.0 | 2.4 | 3.4 |
| 10 | 220 | 6.8 | | | 100 | 2.2 | 2.4 | 3.5 |
| 11 | 230 | 6.5 | | | 100 | 2.4 | 2.8 | 3.5 |
| 12 | 220 | 7.2 | | | 100 | 2.5 | | 3.4 |
| 13 | 230 | 7.0 | | | 100 | 2.4 | | 3.4 |
| 14 | 230 | 7.0 | | | 100 | 2.2 | | 3.4 |
| 15 | 220 | 7.0 | | | — | 1.8 | | 3.3 |
| 16 | 220 | 6.6 | | | — | — | | 3.3 |
| 17 | 225 | 5.1 | | | | | | 3.2 |
| 18 | (230) | 4.0 | | | | | 3.2 | (3.2) |
| 19 | 260 | 3.5 | | | | | 2.7 | 3.1 |
| 20 | 250 | 3.4 | | | | | 3.1 | 3.1 |
| 21 | 270 | 3.0 | | | | | 3.5 | 3.1 |
| 22 | (275) | 2.8 | | | | | 3.7 | (3.0) |
| 23 | (280) | (2.8) | | | | | 4.4 | (3.0) |

Time: 157.5°E.
Sweep: 1.0 Mc to 13.0 Mc in 1 minute 55 seconds.

# TABLE 70

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form accepted June 1946

## IONOSPHERIC DATA

F2 (Characteristic), Km (Unit), March (Month), 1953

National Bureau of Standards (Institution)

Observed at Washington, D.C.

Lat 38.7°N, Long 77.1°W

75°W Mean Time

Scaled by: F. J. McC., E. J. W.

Calculated by: F. J. McC., E. J. W., N. B.

| Day | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | (270)S | (290)S | (280)S | 270 | 250 | 270 | (300)S | 240 | 240 | 260 | 270 | 290 | 250 | 300 | 280 | 290 | 270 | 250 | 210 | 230 | 240 | (240)S | 250 | (280)S K |
| 2 | (270)S K | (320)S K | (330)S K | (310)S K | S K | E K | F K | 300 K | G K | G K | G K | G K | G K | G K | G K | G K | 330 K | (350)L K | 270 K | 270 K | (260)S K | 250 K | [240]S K | (330)S K |
| 3 | (300)A | 270 | (270)S | 280 | 260 | (240)S | [240]F | 240 | 250 | 280 | 280 H | 290 | 290 | 280 | 260 | 300 | 260 | 230 | 230 | 210 | 230 | 250 | (250)S | 240 |
| 4 | (300)S | (270)S | 250 | 240 | 240 | (240)S | (280)S | 220 | 220 | 250 | 250 | 310 | 290 | 250 | 260 | 260 | 250 | 240 | 220 | 210 | 220 | 250 | 250 | 270 |
| 5 | 280 | 270 | 250 | 250 | 230 | 230 | (240)S | 220 | 220 | 250 | 270 | 280 | 280 | 300 | 270 | 260 | 230 | 250 | 220 | 210 | 220 | (240)S | (250)S | (250)S |
| 6 | 260 | (270)S | (280)S | (260)S | 250 | (240)S | 230 | 220 | 230 | (250)H | (280)L | [280]L | 270 H | 300 | 270 | [260]C | 260 | 220 | 220 | 230 | 240 | 230 | 250 | 250 |
| 7 | (250)S | 240 | S | S | (290)S | (290)S | (240)S | 240 | 230 H | 320 | G | 420 | 440 | 360 | 330 | 320 | 300 | 260 | 230 | 230 | (240)S | (290)S | (300)S | (310)S |
| 8 | [300]A | (290)S | 250 | (240)S | 250 | (260)S | 260 | 240 | 280 | 300 | 300 | 350 K | 320 K | 300 K | 320 K | 290 K | 280 K | 270 K | 280 K | 280 K | 270 K | 270 K | 260 L | S K |
| 9 | S K | S K | <370 E K | <320 E K | <300 E K | S K | S K | 260 K | G K | G K | G K | G K | G K | 450 K | 350 K | 440 K | 410 K | 310 K | 270 L | 250 K | 250 K | 240 K | (280)S K | (260)S |
| 10 | (250)S | (300)S | A | A | A | S | S | 250 | (300)L | 340 | 410 K | 400 K | 430 K | 400 K | 370 K | 370 K | 310 K | 300 K | 250 | 230 | 250 | (270)S | (280)S | 290 |
| 11 | (280)S | S | S | (280)S | (290)S | S | S K | 250 K | G K | 420 K | G K | 420 K | 500 K | 340 K | 370 K | 320 L | 300 K | 260 K | 240 | 230 | (240)S | (260)S | (250)S | (270)S |
| 12 | (280)S | [280]S | (280)S | (270)S | (260)S | (290)S | (270)S | 240 | 320 | 350 | 420 | 340 | 310 | 330 | 330 | 370 H | (300)L | 250 | 240 | 220 | 240 | 250 | (250)S | (260)S |
| 13 | (270)S | [270]S | (270)S | (270)S | 260 | (250)S | (240)S | 240 H | 270 H | 270 | 290 H | 290 H | 280 H | 270 | 290 | 290 | 250 | 250 | 230 | 220 | (240)S | 240 | (250)S | (260)S |
| 14 | (280)S | (290)S | 270 | (250)S | (270)S | (290)S | (250)S | 260 | 300 | 320 | 300 H | 320 | 300 | 280 | 300 | 270 | 270 | 250 | 230 | 220 | 220 | (250)S | (250)S | 230 |
| 15 | 260 | (260)S | (280)S | (260)S | 240 | (280)S | 250 | 230 | 260 | (360)L | 340 | 290 | 300 | 240 | 280 | 280 | 280 | 250 | 230 | 220 | (240)S | (270)S | (270)A | (270)S |
| 16 | (270)S | (270)S | 250 | 250 | 250 | (260)S | (250)S | 220 | 280 | 280 | 310 | 290 | 270 | 300 | 290 | 260 | 260 | 250 | 230 | 220 | 240 | 250 | 250 | (260)S |
| 17 | (280)S | [280]S | (270)S | (270)S | 260 | (250)S | (240)S | (230)L | 250 | 300 | 320 | 300 | 300 | 300 | 290 | 270 | 260 | 240 | 220 | 200 | (230)S | (260)S | (270)S | (270)S |
| 18 | (280)S | 240 | 270 | 270 | 250 | 250 | 240 | 230 | 250 H | 300 | 360 | 290 | 310 | 310 | 300 | 300 | 250 | 250 | 230 | 230 | 240 | 250 | 250 | 270 |
| 19 | (270)S | 260 | 260 | 270 | 250 | (260)S | 240 | 250 | (330)L | 340 | 340 | 370 | 300 | 280 | 290 | 290 | 280 | 260 | 240 | 220 | 250 | 250 | 250 | 250 |
| 20 | (280)S | [240]A | [240]A | S | (270)S | (270)S | 240 | 230 H | 250 | 270 | 270 | 290 | 270 | 280 | 330 K | 270 K | 240 K | 260 K | 220 K | 210 K | 230 K | 230 K | (250)S K | (300)S K |
| 21 | (310)S K | (310)S K | (300)S K | 250 K | 230 K | [260]S K | (290)S K | 250 K | (430)L K | G K | G K | G K | G K | G K | (480)S K | 510 K | 430 K | 360 K | 260 K | (240)S K | (260)S K | (290)S K | (320)S K | (310)S |
| 22 | (310)S | (320)S | (300)S | 240 | 260 | (270)S | 270 | 270 | 270 | 370 | 340 | 360 | 350 | 370 | 310 | 360 | 330 | 300 | 250 | 240 | 230 K | (250)S K | S K | E K |
| 23 | E K | E K | E K | 300 K | 240 K | [260]S K | 270 K | 250 K | G K | G K | G K | G K | G K | G K | G K | G K | 340 K | G K | 250 K | 240 K | (290)S K | (300)S K | S K | S K |
| 24 | (330)S K | (230)S K | (300)S K | [300]S K | (300)S K | [280]S K | 270 K | 240 K | 350 K | 420 K | 400 K | 430 K | 410 K | 440 K | 400 K | 330 K | 330 K | 300 K | 250 K | 250 K | 230 K | (260)S K | S K | A K |
| 25 | S K | S K | S K | S K | S K | S K | S K | (290)S K | 230 H K | 240 K | G K | G K | 400 K | 410 H K | 380 K | 340 K | 300 K | 330 K | 290 K | 250 K | 250 K | (270)S K | S K | S K |
| 26 | S K | S K | S K | S K | S K | S | 250 | 230 | 310 | 300 | 300 | 340 | 320 | 300 | 280 | 300 | 300 | 260 | 240 | 230 | 220 | 230 | (230)S | (280)S |
| 27 | (280)S | 250 | 270 | 280 | (320)S K | [300]S K | 280 K | 260 K | G K | G K | G K | G K | 450 K | 440 K | 360 K | 360 K | 350 K | 300 K | 260 | 230 | 240 | (270)S | (290)S | [280]S |
| 28 | (290)S | [300]S | (310)S | [300]S | (300)S | [280]S | 270 L | G K | G K | G K | G K | G K | G K | 430 K | 380 K | 370 K | 340 K | 300 K | 250 K | 250 | 260 | 260 | (280)S | S |
| 29 | S | S | (280)S | (280)S | (300)S | (310)S | 270 | 220 | G | G | 380 | 360 | 350 | 320 | 330 | 320 | 300 | 280 | 250 | 250 | 250 | 250 | (270)S | 280 |
| 30 | 280 | (300)S | 270 | 260 | 270 | [260]S | 260 | 230 | 340 | 380 | 360 | 400 | 390 | 370 | 340 | [330]C | 320 | (280)L | 250 | 240 | 230 | 250 | (270)S | (270)S |
| 31 | (280)S | (290)S | (240)S | 260 | [260]S | (270)S | 260 | (260)L | [280]C | 310 | 330 | 360 | 320 | 330 | 290 | 310 | 290 | 280 | 250 | 240 | (240)S | 240 | 240 | (240)S |
| Median | (280) | (280) | (280) | 270 | 260 | (260) | 260 | 240 | 280 | 340 | 340 | 360 | 320 | 320 | 320 | 300 | 300 | 260 | 240 | 230 | 240 | 250 | (250) | (270) |
| Count | 27 | 26 | 24 | 26 | 26 | 26 | 27 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 27 | 26 |

Sweep 1.0 Mc to 25.0 Mc in .025 min

Manual ☐ Automatic ☒

# TABLE 71

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

## IONOSPHERIC DATA

foF2 (Characteristic), Mc (Unit), March (Month), 1953

Observed at Washington, D.C.

Lat. 38.7°N, Long 77.1°W

National Bureau of Standards (Institution)

Scaled by: F.J.Mc C., E.J.W.

75°W Mean Time

Calculated by: F.J.McC., E.J.W., N.B.

| Day | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2.4 | 2.2 | 2.3 | 2.3 | 2.2 | 1.8 F | 2.1 F | 3.5 | 5.0 | 5.0 | 5.3 | 6.0 | 6.1 | 5.6 | 5.8 | 6.0 | 5.2 | 5.5 | 4.8 | 3.7 | 3.4 | 3.1 F | 3.0 F | 2.8 F K |
| 2 | 2.7 F K | K (2.1) J F | K (1.7) J S | K (1.7) D S | F S K | K < 1.0 E | F K | 2.6 K | < 3.0 G K | < 3.3 G K | < 3.4 G K | < 3.6 G K | < 3.6 G K | < 3.6 G K | < 3.5 G K | < 3.5 G K | 4.2 K | 3.5 K | 3.9 K | K (3.4) F S | 3.2 F K | 2.5 F K | K (1.7) F S | K (2.0) F S |
| 3 | 2.4 J S | 2.5 F | 2.6 F | 2.5 F | (2.2) F S | 1.9 J S | [2.8] F S | 3.7 F S | 5.2 | 5.8 | (5.6) H | 6.0 | 6.1 | 6.7 | 6.4 | 6.4 | 6.0 | 6.6 | 5.5 | 5.0 | 3.5 | 2.7 F | 2.7 F | 2.7 |
| 4 | 2.3 | 2.4 F | 2.5 F | 2.3 F | 2.0 F | 2.0 F | 2.1 F | 4.4 | 5.4 | 6.4 | 6.4 | 6.2 | 6.9 | 7.0 | 6.0 | 6.2 | 6.0 | 6.2 | 5.4 | 4.4 | 3.8 | 3.2 | 3.1 | 2.9 |
| 5 | 2.8 | 2.7 | 2.6 | 2.5 | 2.2 | 2.2 | 2.2 | 4.0 | 4.9 | 5.5 | 5.2 | 6.0 | 6.4 | 6.0 | 6.8 | 6.7 | 6.2 | 6.2 | 5.7 | 4.9 | 3.6 | 3.2 | 3.0 | 2.9 |
| 6 | 2.5 F | 2.3 F | 2.5 F | 2.5 F | 2.6 | 2.6 | 2.5 | 4.2 | 4.9 | (6.0) H | 5.4 | 6.4 | 6.4 H | 6.4 | 6.8 | [6.7] C | 6.6 | 6.3 | 5.2 | 5.0 J S | 4.1 J S | 4.1 J S | 3.7 | 3.6 |
| 7 | 3.1 | 3.0 | 2.1 | 2.1 | 2.3 | 2.1 F | 2.0 F | 3.3 | 3.7 J S | 4.2 | < 4.0 G | 4.4 | 4.5 | 4.9 | 5.0 | 5.1 | 5.0 | 5.0 | 4.3 | 3.1 | 2.7 | 2.4 F | 2.3 F | (2.3) F |
| 8 | (2.0) A F | 2.2 J F | (2.5) J F | 2.4 F | 2.2 F | 2.1 F S | 2.2 F | 3.8 | 5.0 | 4.8 | 5.0 | 5.0 K | 6.0 K | 6.2 K | 6.2 K | 6.4 K | 6.8 K | 6.6 K | 6.8 K | 6.6 K | K 6.4 J S | K 5.2 J S | K 3.6 Z F | 1.9 K |
| 9 | 1.9 K | K 1.6 J S | K 1.7 J S | 1.7 F K | 1.6 F K | 1.8 F K | 1.7 K | 3.0 K | < 3.4 G K | < 3.5 G K | < 3.5 G K | < 3.7 G K | < 3.8 G K | 4.3 K | 4.5 K | 4.2 K | 4.3 K | 4.6 K | 4.6 K | 4.3 K | 3.1 F K | 4.0 K | 3.2 K | 2.7 |
| 10 | 2.8 J F | 2.4 | (2.7) A | 2.4 | [3.2] A | 1.9 | 2.0 | 3.8 | 4.2 | 4.5 | 4.6 K | 4.5 K | 4.5 K | 4.5 K | 4.9 K | 4.6 K | 4.7 K | 4.5 K | 4.5 | 3.7 | 3.0 | 2.7 F | 2.4 F | 2.5 F |
| 11 | 2.2 | (2.0) F | 1.9 J S | 1.9 J S | 1.8 | 1.7 J S K | 1.8 J S | 3.1 K | < 3.6 G K | 3.9 K | < 3.8 G K | K 4.3 J H | 4.4 K | 4.8 K | 4.7 K | 4.9 K | 4.7 K | 4.8 K | 4.3 | 4.4 | 3.5 | 3.2 | 2.9 | 2.4 |
| 12 | 2.2 | 2.0 J S | 1.9 | 2.0 | 2.0 | 2.0 | 2.1 | 3.4 | 3.9 | 4.2 | 4.3 | 4.7 | 4.9 | 5.0 | 5.0 | 4.8 N | 4.9 | 4.9 | 4.5 | 4.1 | 3.5 | 3.1 | 2.8 | 2.5 |
| 13 | 2.3 | 2.0 | 1.9 | 2.0 | 2.1 F | 2.1 F | 2.2 | 4.0 H | 4.4 H | 5.2 | 5.3 H | 5.2 H | 5.2 H | 5.2 J S | 5.5 | 5.6 | 5.3 | 5.3 | 5.6 | 5.0 | 3.9 | 3.7 | 3.2 | 2.6 |
| 14 | 2.4 | 2.4 | 2.3 J S | 2.3 J S | 2.2 | 2.3 | 2.4 | 3.6 | 4.3 | 4.3 | 4.7 H | 5.2 | 5.6 | 5.7 | 5.6 | 5.8 | 5.6 | 5.5 | 5.6 | 4.7 | 4.1 | 3.7 | (3.3) J S | 3.1 J S |
| 15 | 2.8 | 2.5 | 2.2 J S | 2.4 | 2.4 | 2.2 | 2.5 | 3.7 | 4.6 | 4.3 | 5.1 | 6.2 | 5.9 | 6.0 | 6.0 | 6.0 | 5.5 | 5.2 | 4.9 | 4.1 | 3.4 | 3.1 | 3.2 | 3.1 |
| 16 | 2.9 | 2.5 | 2.5 | 2.4 | 2.3 | 2.2 | 2.6 | 4.1 | 4.6 | 5.0 | 5.2 | 5.8 | 6.1 | 5.9 | 5.8 | 5.8 | 5.5 | 5.3 | 5.5 | 4.6 | 3.9 | 3.5 | 3.3 | 2.7 |
| 17 | 2.3 | 2.2 F | 2.2 | 2.3 F | 2.4 F | (2.5) S | 2.9 | 4.2 | 4.7 | 4.8 | 5.2 | 5.4 | 5.9 | 5.6 | 5.7 | 5.8 | 5.6 | 5.6 | 5.0 | 4.5 | 2.8 | 2.5 | 2.3 | 2.3 |
| 18 | 2.3 | 2.2 | 2.1 F | 2.4 F | 2.3 | 2.3 F | 2.6 | 4.0 | 4.6 H | 4.5 | 5.0 | 5.6 | 5.5 | 5.6 | 5.8 | 5.6 | 5.2 | 4.9 | 4.7 | 4.5 | 4.0 | 3.8 | 3.5 J S | 3.2 |
| 19 | 3.1 | 2.9 J S | 2.7 | 2.8 | 2.6 | 2.5 | 2.6 | 3.6 | 4.0 | 4.5 | 5.1 | 5.0 | 6.1 | 6.4 | 5.6 | 5.6 | 5.2 | 5.8 | 5.2 | 5.2 | 4.5 | 4.1 | 3.6 | 2.9 |
| 20 | 2.3 | [2.0] A | [1.9] A | 1.8 F | 2.2 | 2.2 F | 2.7 | 4.5 H | 5.0 | 5.7 | 5.8 | 6.3 | 5.6 | 6.7 | 5.5 K | 6.6 K | 6.7 K | (7.4) S K | 7.0 K | 5.4 K | 5.0 K | 3.9 K | 2.7 K | 2.5 K |
| 21 | 2.2 K | 2.1 K | 2.1 K | 2.1 K | K (1.6) D S | K (1.6) J S | 2.2 K | 3.2 K | (3.6) D S | < 3.6 G K | < 3.7 G K | < 3.8 G K | < 3.8 G K | < 3.8 G K | 4.1 K | 4.1 K | 4.0 K | 4.1 K | 4.2 K | 3.3 K | K (2.6) J S | 2.4 F K | K (2.1) D S | 2.1 J S |
| 22 | (2.3) D S | [2.3] D S | 2.3 S | 2.4 | (1.9) D S | (1.8) D S | 2.5 | 4.2 | 4.3 | 4.5 | 4.6 | 4.9 | 4.9 | 4.7 | 5.0 | 4.7 | 4.8 | 5.1 | 4.9 | 3.9 | K 3.7 J S | 2.8 F K | 2.0 K | < 1.0 E K |
| 23 | < 1.0 E K | < 1.0 E K | K (1.3) S F | 1.8 K | K 1.8 S F | [2.0] S K | 2.3 K | 3.0 K | < 3.4 G K | < 3.6 G K | < 3.8 G K | < 3.8 G K | < 3.8 G K | < 3.8 G K | < 3.9 G K | < 3.7 G K | 4.1 K | < 3.5 G K | 3.8 K | 3.2 K | 2.4 K | K 2.4 F S | K (1.9) J S | K (1.8) J F |
| 24 | 2.0 K | 2.2 F K | K (2.1) F S | [2.0] F K | 1.9 F K | K [2.2] F S | 2.4 K | 3.6 K | K 4.0 M F | 4.1 K | 4.3 K | 4.4 K | 4.6 K | 4.6 K | 5.0 K | 5.8 K | 5.6 K | 5.6 K | 5.4 K | 5.8 K | 4.1 K | K (2.6) J F | K 1.7 J S | [1.4] A K |
| 25 | F S K | K 1.7 J S | K 1.9 J S | S K | S K | F S K | (2.1) S K | 3.0 M K | 3.2 K | < 3.7 G K | < 3.8 G K | 4.8 K | 5.0 M K | 5.1 K | 6.2 K | 5.6 K | 4.7 K | 4.7 K | 4.6 K | 3.8 K | (3.5) S K | 2.7 K | K (1.9) F S | K (1.9) F S |
| 26 | K 1.5 J S | K (1.4) J S | K (1.5) J S | K 1.4 J S | K (1.5) J S | (1.5) J F | 2.6 | 3.9 | 4.6 | 4.7 | 5.2 | 5.6 | 5.6 | 5.8 | 6.0 | 5.4 | 6.0 | 6.1 | 6.2 | 6.2 | 5.2 | 4.7 | 3.1 F | 3.0 |
| 27 | 2.7 F | 2.8 F | 2.3 | 1.9 F | K 1.5 J S | 1.8 F K | 2.3 K | 3.2 K | < 3.4 G K | < 3.7 G K | < 4.0 G K | < 4.0 G K | 4.4 K | 4.5 K | 4.7 K | 4.7 K | 4.6 K | 4.6 K | 4.6 | 4.2 | 3.2 | 2.8 F | 2.4 F | 2.4 |
| 28 | 2.2 J F | (1.8) F S | 1.7 J S | 1.7 J S | 1.8 J S | (1.6) J S | 2.5 K | < 3.2 G K | < 3.5 G K | < 3.8 G K | < 3.9 G K | < 3.9 G K | < 4.0 D K | 4.5 K | 4.8 K | 4.7 K | 4.7 K | 4.4 K | 4.1 K | (4.0) S | (3.9) S | 3.0 | 2.6 | 2.4 |
| 29 | 1.9 | [2.0] S | 2.2 | 1.9 | 1.9 J S | 1.9 J S | 2.5 | 3.5 | < 3.6 G | < 3.8 G | 4.5 | 5.0 | 5.2 | 5.5 | 5.4 | 5.4 | 5.2 | 5.1 | 4.4 | 4.2 | 4.0 | 3.5 | 3.2 | 3.0 |
| 30 | 2.5 S F | 2.2 F | 2.2 F | 2.0 | (1.8) J S | 2.0 | 2.8 | 3.7 | 4.1 | 4.5 | 4.8 | 4.8 | 5.0 | 5.0 | 5.1 | [4.9] C | 4.7 | 4.6 | 4.6 | 4.6 | 4.6 | 3.5 | 3.1 | 2.7 |
| 31 | 2.5 | 2.4 | 2.2 | 2.2 | 2.1 | 2.2 | 3.1 | 4.2 | [4.8] C | 5.5 | 5.2 | 5.0 | 5.6 | 5.5 | 5.6 | 5.6 | 5.5 | 5.4 | 5.5 | 5.5 | 5.7 | 4.8 | 4.3 | 3.2 J S |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| Median | 2.3 | 2.2 | 2.2 | 2.2 | 2.1 | 2.0 | 2.4 | 3.7 | 4.3 | 4.5 | 4.8 | 5.0 | 5.2 | 5.5 | 5.5 | 5.6 | 5.2 | 5.2 | 4.9 | 4.4 | 3.7 | 3.2 | 3.0 | 2.6 |
| Count | 30 | 31 | 31 | 30 | 29 | 30 | 30 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 |

Sweep 1.0 Mc to 2.50 Mc in 0.25 min

Manual ☐ Automatic ☒

U.S. GOVERNMENT PRINTING OFFICE 1946 O - 702319

# TABLE 72

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

## IONOSPHERIC DATA

foF2 (Characteristic), Mc (Unit), March (Month), 1953

National Bureau of Standards (Institution)

Observed at Washington, D.C.

Scaled by: F.J.McC., E.J.W.

Lat 38.7° N, Long 77.1° W — 75° W Mean Time

Calculated by: F.J.McC., E.J.W., N.B.

| Day | 0030 | 0130 | 0230 | 0330 | 0430 | 0530 | 0630 | 0730 | 0830 | 0930 | 1030 | 1130 | 1230 | 1330 | 1430 | 1530 | 1630 | 1730 | 1830 | 1930 | 2030 | 2130 | 2230 | 2330 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2.3 | 2.2 | 2.3 | 2.2 | 1.9 F | 1.9 F | 2.7 | 4.7 | 5.0 | 5.2 | 5.3 | 6.2 | 5.9 J H | 5.6 | 5.9 | 5.6 | 5.3 | 5.2 | 4.2 | 3.7 | 3.2 | 2.9 F | 3.0 F | 2.7 F K |
| 2 | 2.5 K F | (2.0) K J S | (1.7) K J S | F S K | F S K | F S K | (2.2) K D S | 2.8 K | <3.1 K G | <3.4 K G | <3.5 K G | <3.6 K G | <3.7 K G | <3.6 K G | <3.5 K G | 4.3 K | <3.4 K G | 3.7 K | 3.8 F K | 3.2 F K | 2.9 F K | 2.2 F K | 1.7 F K | 2.2 F K |
| 3 | 2.1 F | 2.5 F | 2.1 F S | 2.2 F S | 1.9 F | [2.3] F S | 2.7 F | 4.2 | 5.4 | 6.2 | 5.8 | 5.9 | 6.6 | 6.8 | 6.5 | 6.4 | 6.2 | 5.6 | 5.6 | 4.1 | 3.0 | 2.7 | 2.3 F | 2.4 |
| 4 | 2.4 F | 2.4 F | 2.5 | 2.4 F | 2.1 F | 2.0 F | 3.0 | 4.9 | 6.0 | 6.1 | (5.6) H | 6.4 | 7.0 | 6.2 H | 6.2 | 6.0 | 6.0 | 6.0 | 4.9 | 4.1 | 3.5 | 3.0 | 3.0 | 2.8 |
| 5 | 2.8 | 2.7 | 2.5 | 2.4 | 2.1 F | 2.1 | 3.2 | 4.3 H | 5.3 | 5.5 | 5.6 | 6.2 | 6.0 | 6.4 | 6.8 | 6.8 | 5.7 | 6.0 | 5.2 | 4.4 | 3.3 | 3.1 | 3.0 | 2.7 |
| 6 | 2.2 F | 2.5 F | 2.4 | 2.5 | 2.7 | 2.7 | 3.1 | 4.5 | 5.2 | (5.6) H | 6.2 | 6.6 | 6.8 | 6.4 | 6.7 | [6.6] C | 6.6 | 5.8 | 5.1 | 4.5 | 4.3 | 3.9 | 3.7 | 3.5 |
| 7 | 3.1 | 2.4 F | 2.1 F | 2.1 | 2.2 F | 2.0 F | 2.7 | 3.5 | 4.2 H | 4.3 | 4.4 H | 4.6 | 4.6 H | 4.9 | 5.1 | 5.0 | 4.9 | 4.6 | 3.8 | 3.0 | 2.4 F | 2.3 F | (2.2) J F | [2.1] F |
| 8 | (2.2) J F | 2.4 F | 2.4 F | 2.3 J F | 2.2 F | 2.0 F | 3.1 | 4.5 | 4.8 | 5.4 | 5.2 H | 5.5 K | 6.2 K | 6.0 K | 6.4 K | 6.4 K | 6.8 K | 6.6 K | 6.2 K | K 7.6 J S | K 6.8 J S | 4.5 K | 2.4 K | 1.7 K |
| 9 | 1.7 K | 1.5 K | 1.7 F K | 1.7 F K | 1.7 F K | K 1.7 J S | 2.5 K | 3.4 K | <3.6 K G | 3.5 K | 3.7 K | 3.8 K | <4.0 K G | 4.3 K | 4.2 K | 4.3 K | 4.6 K | 4.6 K | 4.5 K | 4.2 K | K 4.2 J S | 3.8 K | 2.9 K | 2.8 |
| 10 | 2.3 F | 2.7 J A | 2.6 | 2.5 | 2.0 | 1.9 | 3.0 | 4.2 | 4.6 | 4.5 | 4.5 K | 4.6 K | 4.5 K | 4.6 K | 4.7 K | 4.8 K | 4.6 K | 4.6 K | 4.2 | 3.4 | 2.9 | 2.7 F | 2.5 F | 2.1 F |
| 11 | 2.0 F | 2.0 | 1.8 | 1.7 J S | 1.8 | 1.7 J S | 2.5 K | 3.3 K | [3.6] C K | <3.8 G K | 4.3 K | 4.4 K | 4.7 K | 4.8 K | 4.8 K | 4.8 K | 4.7 K | 4.4 K | 4.3 | 4.1 J S | (3.4) D S | 3.0 | 2.6 J S | 2.3 |
| 12 | 2.0 | (1.9) J S | 2.0 J S | 2.0 | 2.0 | 1.9 | 2.9 | 3.6 | 4.1 | 4.3 | 4.4 | 4.7 | 4.9 | 5.0 | 5.1 | 4.9 | 4.9 | 4.7 H | 4.2 | 3.9 | 3.3 | 3.0 | 2.7 | 2.4 |
| 13 | 2.1 | 2.0 | 2.0 J S | 2.1 | 2.1 F | 2.1 F | 3.1 | 4.1 | 4.8 | 4.9 | 5.2 | 5.2 | 5.3 | 5.9 | 5.4 H | 5.1 | 5.4 | 5.3 | 5.3 | 4.4 J S | 3.8 | 3.3 | 3.1 | 2.7 |
| 14 | 2.3 | 2.3 | 2.3 | 2.2 | 2.3 | 2.3 | 3.1 | 3.9 | 4.3 | 4.6 | 5.1 | 5.4 | 5.8 | 5.1 | 5.8 | 5.8 | 5.4 | 5.5 | 5.4 | 4.6 | 3.9 | 3.5 | 3.2 | 3.1 |
| 15 | 2.7 | 2.3 | 2.3 | 2.4 | 2.0 | 2.3 | 3.2 | 4.2 | 4.2 | 4.7 | 5.5 | 6.1 | 5.9 | 6.2 | 5.8 | 5.7 | 5.4 | 5.0 | 4.7 | 3.9 | 3.1 | 3.2 | 3.1 | 3.0 |
| 16 | 2.6 | 2.5 | 2.4 | 2.4 | 2.3 | 2.1 J S | 3.4 | 4.4 | 5.0 | 5.2 | 5.6 H | 5.8 | 5.8 | 6.0 | 5.8 | 5.7 | 5.3 | 5.4 | 5.4 | 4.2 | 3.6 | 3.4 | 3.0 | 2.5 |
| 17 | 2.2 | 2.2 | 2.3 | 2.3 F | 2.5 | 2.5 | 3.6 | 4.5 | [4.7] C | 5.0 | 5.4 H | 5.6 | 5.8 | 5.6 | 6.0 | 5.6 | 5.6 | 5.4 | 5.0 | 3.3 | 2.6 | 2.4 | 2.3 | 2.3 |
| 18 | 2.3 | 2.2 | 2.2 | 2.3 | 2.2 F | 2.3 | 3.5 | 4.2 | 4.7 | 4.3 | 5.5 | 5.2 | 5.6 | 5.8 | 5.4 H | 5.4 | 5.1 | 5.0 | 4.6 | 4.2 | 3.9 J S | 3.6 | 3.2 | 3.0 |
| 19 | 3.0 | 2.8 | 2.7 | 2.8 | 2.3 | 2.5 | 3.1 | 3.7 | 4.3 | 4.4 | 4.2 H | 5.6 | 5.9 | 6.2 | 5.6 | 5.6 | 5.2 | 5.6 | 5.3 | 4.8 | 4.2 | 3.8 | 3.2 | 2.7 |
| 20 | 2.1 | [2.0] A | 1.8 | 2.1 | 2.2 F | 2.2 | 4.0 | 4.4 | 5.3 | 6.3 | 5.9 | 5.8 | 5.5 J S | 6.0 | 6.0 K | 6.1 K | 7.2 K | (7.4) S K | 6.5 K | 5.2 K | 4.5 K | 3.6 S K | 2.6 K | 2.5 K |
| 21 | 2.3 K | (2.1) S K | 2.0 K | 2.0 K | K (1.6) J S | K (1.7) J S | 2.9 K | 3.3 K | <3.5 G K | <3.6 G K | <3.7 G K | K <3.9 H G | K <3.7 H G | <3.8 G K | K (4.0) D S | 4.1 K | 4.0 K | 4.2 K | 3.8 K | 3.1 S K | K 2.6 F S | K (2.2) D F | 2.1 K | (2.2) J S |
| 22 | (2.0) D F | (2.2) D S | 2.3 | 2.2 S | (1.8) D S | (1.9) D S | 3.4 | 4.2 | 4.4 | [4.6] H | 4.7 | 5.0 | 4.9 | 4.9 | 5.0 | 4.7 | 4.9 | 5.1 | 4.5 | 3.9 | 3.1 K | 2.4 F K | S K | E K |
| 23 | <1.0 E K | (1.3) S K | 1.6 F K | 2.0 F K | 1.7 F K | K (1.6) J S | 2.9 K | <3.3 G K | [<3.5] C K | <3.6 G K | < 3.8 G K | <3.8 G K | <3.8 G K | <3.9 G K | <3.7 G K | 4.0 K | <3.5 G K | 3.8 K | 3.5 K | K 2.8 J S | 2.4 K | 2.1 F K | 2.0 F K | K (1.9) F S |
| 24 | 2.0 F K | 2.2 F K | K [2.0] F S | F K | K [2.0] F S | K (1.7) J S | 3.2 K | 3.7 K | (4.2) H K | 4.3 K | 4.3 K | 4.5 K | 4.6 K | 4.9 K | 5.3 K | 5.7 K | 5.6 K | 6.1 K | 5.7 K | 5.0 K | 3.2 K | K 2.1 J S | K (1.4) J S | K (1.5) J S |
| 25 | K [1.8] F S | (2.1) S K | A K | S K | F S K | S K | 2.7 K | 3.3 K | <3.5 G K | <3.8 G K | (4.5) S K | K (4.8) J H | 5.4 K | 5.5 K | 6.1 K | 5.0 K | 5.0 K | 4.6 K | 4.3 K | 3.6 K | (3.1) S K | K (2.4) J S | K (2.1) J S | [1.7] F K |
| 26 | K 1.5 J S | [1.4] S K | K 1.4 J S | K (1.5) J S | K (1.6) J S | 1.8 J S | 3.3 F | 4.1 | 4.5 | 4.7 | 4.8 | 5.7 | 5.7 | 5.8 | 5.8 | 5.7 | 6.0 | 6.1 | (6.2) S | (5.8) S | (5.0) S | 3.8 | 3.0 | 2.9 F |
| 27 | (3.8) S | 2.3 | 2.2 | 1.8 F | 1.8 F K | K 1.8 J C | 2.4 K | <3.4 G K | <3.5 G K | <3.8 G K | <4.0 G K | 4.3 K | 4.5 K | 4.6 K | 4.8 K | 4.6 K | 4.6 K | 4.6 K | 4.6 | 3.9 | 3.0 | 2.5 F | 2.4 F | 2.2 J F |
| 28 | (2.0) S | 1.7 J S | (1.7) J S | 1.7 J S | 1.7 J S | 1.6 J S | 2.9 K | <3.4 G K | <3.6 G K | <3.9 G K | <4.0 G K | <4.0 G K | 4.4 K | 4.7 K | 4.7 K | 4.7 K | 4.6 K | 4.3 K | 4.2 K | 4.1 | (3.2) S | 2.8 J S | 2.5 | 2.1 J S |
| 29 | (1.8) J S | (2.2) S | 2.0 | 1.8 | 1.9 | 2.0 | 3.0 | <3.4 G | <3.7 G | <3.8 G | (4.7) H | 5.2 | 5.2 | 5.2 | 5.4 | 5.2 | 5.4 | 4.9 | 4.3 | 4.3 | 3.8 | 3.3 | 3.0 | 2.5 F |
| 30 | 2.3 S F | 2.3 F | 2.1 F | 1.9 F | 2.0 | 2.1 | 3.3 | 4.2 | 4.2 | 4.8 | 4.6 | 4.8 | [4.9] C | 5.2 | [5.0] C | 4.9 | 4.7 | 4.5 | 4.5 | 4.7 | 4.0 | 3.3 | 3.0 J S | 2.8 |
| 31 | 2.4 | 2.3 | 2.2 | 2.1 | 2.1 | 2.5 | 4.0 | 4.5 | 5.0 | 5.4 | 5.0 | 5.4 | 5.4 | 5.8 | 5.4 | 5.6 | 5.4 | 5.4 | 5.3 | 5.6 | 5.2 | 4.5 J S | 3.7 | 2.9 |
| Median | 2.2 | 2.2 | 2.2 | 2.2 | 2.0 | 2.0 | 3.1 | 4.1 | 4.3 | 4.6 | 4.7 | 5.2 | 5.4 | 5.5 | 5.4 | 5.4 | 5.3 | 5.1 | 4.6 | 4.1 | 3.3 | 3.0 | 2.8 | 2.5 |
| Count | 31 | 31 | 30 | 28 | 29 | 29 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 30 | 31 |

Sweep 1.0 Mc to 25.0 Mc in 0.25 min

Manual ☐ Automatic ☒

# TABLE 73

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

## IONOSPHERIC DATA

h'F1 (Characteristic), Km (Unit), March (Month), 1953

Observed at Washington, D.C.

Lat 38.7°N, Long 77.1°W

75° W Mean Time

National Bureau of Standards (Institution)

Scaled by: F. J. McC., E. J. W.

Calculated by: F.J.McC., E.J.W., N.B.

| Day | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | 220 | 240 | 220 | 190 | 190 | 200 H | 190 H | 200 | 200 H | 200 | 240 | | | | | | |
| 2 | | | | | | | | Q K | 250 K | 240 K | 220 K | 190 H K | (250) S K | 230 K | 230 K | 240 K | 230 K | 250 K | | | | | | |
| 3 | | | | | | | | Q | 250 | 240 | 220 | 200 | 190 | 220 | 220 | 220 | 220 | Q | | | | | | |
| 4 | | | | | | | | Q | 210 | 200 | 190 | 180 | 170 H | 250 | 180 | 200 | 220 | 230 | | | | | | |
| 5 | | | | | | | | 200 | 200 | 210 | 200 | 190 | 210 H | 220 | 200 | 200 H | 210 | 210 | | | | | | |
| 6 | | | | | | | | Q | 210 | 190 H | 200 | 200 | 200 H | 210 H | 200 | [210] | 220 | Q | | | | | | |
| 7 | | | | | | | | Q | 210 H | 200 | 200 | 190 | 200 | 200 | 210 | 230 | 230 | 240 | | | | | | |
| 8 | | | | | | | | 230 | 220 H | 220 | 200 | 140 K | 180 K | 230 K | 220 K | 220 K | 240 K | 240 K | | | | | | |
| 9 | | | | | | | | Q K | 250 K | 230 K | 210 K | 250 K | 230 K | 220 K | 230 K | 220 K | 250 K | 250 K | | | | | | |
| 10 | | | | | | | | Q | 230 | 230 | 210 K | 250 K | 220 K | 200 K | 230 K | 200 H K | 220 H K | 240 K | | | | | | |
| 11 | | | | | | | | Q K | 230 K | 250 K | 200 K | 190 K | 190 K | (220) H K | [220] H K | (230) H K | 220 K | 220 K | | | | | | |
| 12 | | | | | | | | Q | 220 | 220 H | 200 | 190 H | 190 H | 200 H | 200 | 200 H | 220 | 230 | | | | | | |
| 13 | | | | | | | | 210 | 210 | 230 | 190 H | 180 H | 260 H | 200 H | 260 | 190 H | 210 H | 230 | | | | | | |
| 14 | | | | | | | | 230 | 210 | 220 | 190 | 190 | 230 | 220 | 210 | 200 | 200 | 230 | | | | | | |
| 15 | | | | | | | | Q | 220 | 210 H | 200 H | 220 H | 220 | 200 | 200 | 220 | 220 | 220 | | | | | | |
| 16 | | | | | | | | Q | 220 | 210 | 200 | 230 | 200 | 220 | 200 | 230 | 210 | 240 | | | | | | |
| 17 | | | | | | | | 210 | 230 | 220 | 220 | 200 | 200 | 210 H | 200 H | 190 H | 220 | 230 | | | | | | |
| 18 | | | | | | | | 200 | 220 | 210 | 210 | 200 | 140 | 200 | 200 | 230 | 220 | 230 | | | | | | |
| 19 | | | | | | | | 230 | 230 | 230 | 210 H | 200 | 200 | 220 | 200 H | 210 | 220 H | 240 | | | | | | |
| 20 | | | | | | | | 220 | 220 | 200 | 200 | 190 | 230 | 220 H | 220 H | 220 H K | 230 K | 220 H K | | | | | | |
| 21 | | | | | | | | Q K | 230 K | 230 K | 200 K | 200 H K | 200 H K | 190 H K | 230 K | 220 K | 230 H K | 230 H K | | | | | | |
| 22 | | | | | | | | 250 | 230 | 210 | 200 H | 200 | 250 | 200 H | 230 H | 220 | 210 H | 220 H | 230 | | | | | |
| 23 | | | | | | | | 190 K | 190 H K | 210 K | 250 H K | 240 H K | 280 H K | 200 K | 200 H K | 230 K | 230 K | 240 K | Q K | | | | | |
| 24 | | | | | | | | Q K | 220 K | (200) H K | 230 K | 220 H K | 220 K | 210 K | 220 K | 220 H K | 220 H K | 260 K | Q K | | | | | |
| 25 | | | | | | | | Q K | 220 K | (230) S K | 210 K | 200 H K | 210 K | 220 K | 220 K | 230 K | 230 K | 220 K | Q K | | | | | |
| 26 | | | | | | | | Q | 220 | 220 | 200 H | 200 | 210 | 200 | 200 | 220 | 220 | 230 | Q | | | | | |
| 27 | | | | | | | | Q K | 220 K | 250 K | 210 K | 190 K | 200 K | 200 K | 200 K | 220 K | 230 K | 240 K | 250 | | | | | |
| 28 | | | | | | | | 230 K | 230 K | 210 K | 210 K | 230 K | 200 K | 210 K | 210 K | 220 K | 230 K | 230 K | 250 K | | | | | |
| 29 | | | | | | | | Q | 230 | 210 | 200 | 180 | 220 | 200 | 230 | 210 | 210 | 230 | 230 | | | | | |
| 30 | | | | | | | | Q | 220 | 200 H | 140 | 190 H | 200 | 200 | 220 | [220] C | 220 | 240 | Q | | | | | |
| 31 | | | | | | | | 230 | [220] C | 210 | 210 | 220 | 190 | 190 H | 190 | 200 H | 220 H | 230 | 230 | | | | | |
| Median | | | | | | | | 220 | 220 | 220 | 200 | 200 | 200 | 210 | 210 | 220 | 220 | 230 | 230 | | | | | |
| Count | | | | | | | | 13 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 29 | 5 | | | | | |

Sweep 1.0 Mc to 25.0 Mc in 0.25 min

Manual ☐ Automatic ☒

Form adopted June 1948

# TABLE 74

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

## IONOSPHERIC DATA

foF1 (Characteristic), Mc (Unit), March (Month), 1953

Observed at Washington, D.C.

Lat. 38.7°N, Long. 77.1°W

75°W Mean Time

National Bureau of Standards (Institution)

Scaled by: F. J. McC., E. J. W.

Calculated by: F.J.McC., E.J.W., N.B.

| Day | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | L | L | L | 3.9 | 4.0 | 4.2$^{N}$ | 4.3$^{N}$ | 4.0 | 4.0$^{N}$ | 3.5 | L | | | | | | |
| 2 | | | | | | | | Q$^{K}$ | 3.0$^{K}$ | 3.3$^{K}$ | 3.4$^{K}$ | (3.6)$^{H}_{K}$ | 3.6$^{K}$ | 3.6$^{K}$ | 3.5$^{K}$ | 3.5$^{K}$ | 3.4$^{K}$ | L$^{K}$ | | | | | | |
| 3 | | | | | | | | Q | L | 3.8 | 4.0 | 4.2 | 4.2 | 4.2 | [4.1]$^{L}$ | 4.0 | L | Q | | | | | | |
| 4 | | | | | | | | Q | L | L | 4.1 | 4.4 | 4.4$^{N}$ | 4.3 | 3.6 | 4.1 | L | L | | | | | | |
| 5 | | | | | | | | L | L | L | L | 4.3 | 4.3$^{N}$ | 4.2 | 4.2 | L | L | 2.5 | | | | | | |
| 6 | | | | | | | | Q | L | (4.0)$^{J}$ | 4.1 | [4.2]$^{L}$ | 4.2$^{N}$ | 4.3 | 4.0 | C | L | Q | | | | | | |
| 7 | | | | | | | | Q | L | 3.6 | 4.0 | 4.0 | 4.1 | 4.1 | 4.0 | 3.9 | 3.6 | L | | | | | | |
| 8 | | | | | | | | L | L | 3.9 | 4.0 | 4.0$^{K}$ | 4.2$^{K}$ | 4.2$^{K}$ | 4.2$^{K}$ | 4.0$^{K}$ | L$^{K}$ | L$^{K}$ | | | | | | |
| 9 | | | | | | | | Q$^{K}$ | 3.4$^{K}$ | 3.5$^{K}$ | 3.5$^{K}$ | 3.7$^{K}$ | 3.8$^{K}$ | 4.0$^{K}$ | 3.9$^{K}$ | 3.8$^{K}$ | 3.5$^{K}$ | L$^{K}$ | | | | | | |
| 10 | | | | | | | | Q | L | 3.7 | 3.8$^{K}$ | 3.9$^{K}$ | 4.0$^{K}$ | 4.0$^{K}$ | 3.8$^{K}$ | 3.8$^{N}_{K}$ | 3.6$^{N}_{K}$ | L$^{K}$ | | | | | | |
| 11 | | | | | | | | Q$^{K}$ | 3.6$^{K}$ | 3.7$^{K}$ | 3.8$^{K}$ | 4.0$^{K}$ | 4.0$^{K}$ | 3.9$^{K}$ | 4.0$^{K}$ | 3.8$^{K}$ | (3.5)$^{P}_{K}$ | L$^{K}$ | | | | | | |
| 12 | | | | | | | | Q | 3.3 | 3.8$^{H}$ | 3.9 | 4.1$^{H}$ | 4.1$^{H}$ | 4.1$^{H}$ | 4.0 | 4.1$^{H}$ | L | L | | | | | | |
| 13 | | | | | | | | L | 3.2 | 3.7 | 3.8$^{J}$ | 4.1$^{H}$ | 4.2$^{H}$ | (4.1)$^{H}$ | 4.1 | 4.0$^{H}$ | 3.7$^{H}$ | L | | | | | | |
| 14 | | | | | | | | L | 3.4 | 3.7 | 3.7 | 4.0 | 4.2 | 4.1 | 3.9 | 3.8 | 3.7 | L | | | | | | |
| 15 | | | | | | | | Q | L | 3.8$^{H}$ | 3.9$^{H}$ | 4.2$^{H}$ | 4.1 | 4.1 | 4.0 | 3.9 | L | L | | | | | | |
| 16 | | | | | | | | Q | L | 3.8 | 4.1 | 4.2 | 4.2 | 4.2 | 4.1 | L | L | L | | | | | | |
| 17 | | | | | | | | L | L | 3.8 | 4.1 | 4.1 | 4.2 | 4.2$^{N}$ | 4.2$^{N}$ | 4.0$^{N}$ | L | L | | | | | | |
| 18 | | | | | | | | L | L | 3.9 | 4.1 | 4.2 | 4.2 | 4.2 | 4.0 | 4.0 | L | L | | | | | | |
| 19 | | | | | | | | L | (3.5)$^{L}$ | 3.8 | 3.9$^{N}$ | 4.1 | 4.2 | 4.1 | 4.1$^{N}$ | 3.9 | L | L | | | | | | |
| 20 | | | | | | | | L | L | 3.6 | 4.0 | 4.2 | 4.2 | 4.2$^{N}$ | 4.2$^{N}_{K}$ | (3.9)$^{N}_{K}$ | (3.8)$^{P}_{K}$ | L$^{K}$ | | | | | | |
| 21 | | | | | | | | Q$^{K}$ | (3.3)$^{L}_{K}$ | 3.6$^{K}$ | 3.7$^{K}$ | 3.8$^{N}_{K}$ | 3.8$^{K}$ | 3.8$^{N}_{K}$ | 3.8$^{K}$ | 3.6$^{K}$ | 3.5$^{N}_{K}$ | 3.2$^{N}_{K}$ | Q$^{K}$ | | | | | |
| 22 | | | | | | | | L | L | 3.8 | 4.0$^{N}$ | 3.9 | 4.1 | 4.0$^{N}$ | 3.9$^{N}$ | 3.8 | 3.6$^{N}$ | 3.9$^{N}$ | L | | | | | |
| 23 | | | | | | | | 2.4$^{K}$ | 3.4$^{N}_{K}$ | 3.6$^{K}$ | 3.8$^{N}_{K}$ | 3.9$^{N}_{K}$ | 3.8$^{N}_{K}$ | 3.8$^{K}$ | 3.8$^{N}_{K}$ | 3.7$^{K}$ | 3.5$^{K}$ | 3.5$^{K}$ | Q$^{K}$ | | | | | |
| 24 | | | | | | | | Q$^{K}$ | 3.5$^{K}$ | (3.1)$^{N}_{K}$ | 3.9$^{K}$ | 4.0$^{N}_{K}$ | 4.0$^{K}$ | 4.1$^{K}$ | 3.9$^{K}$ | 3.9$^{N}_{K}$ | 3.7$^{N}_{K}$ | 3.2$^{K}$ | Q$^{K}$ | | | | | |
| 25 | | | | | | | | Q$^{K}$ | L$^{K}$ | 3.7$^{J}_{K}$ | 3.8$^{K}$ | 3.9$^{N}_{K}$ | 4.0$^{K}$ | 4.0$^{K}$ | 3.9$^{K}$ | 3.8$^{K}$ | 3.7$^{K}$ | 3.2$^{K}$ | Q$^{K}$ | | | | | |
| 26 | | | | | | | | Q | 3.5 | 3.9 | 3.9$^{H}$ | 4.1 | 4.2 | 4.2 | 4.1 | 4.0 | 3.8 | L | Q | | | | | |
| 27 | | | | | | | | Q$^{K}$ | 3.4$^{K}$ | 3.7$^{K}$ | 4.0$^{K}$ | 4.0$^{K}$ | 4.0$^{K}$ | 4.1$^{K}$ | 4.0$^{K}$ | 4.0$^{K}$ | 3.7$^{K}$ | 3.3$^{K}$ | L | | | | | |
| 28 | | | | | | | | 3.2$^{K}$ | 3.5$^{K}$ | 3.8$^{K}$ | 3.9$^{K}$ | 3.9$^{K}$ | 4.0$^{K}$ | 4.1$^{K}$ | 4.0$^{K}$ | 4.0$^{K}$ | 3.7$^{K}$ | 3.3$^{K}$ | L$^{K}$ | | | | | |
| 29 | | | | | | | | Q | 3.6 | 3.8 | 4.1 | 4.0 | 4.3 | 4.2 | 4.2 | 4.0 | 3.9 | L | L | | | | | |
| 30 | | | | | | | | Q | 3.7 | 4.0$^{N}$ | 4.1 | 4.1$^{N}$ | 4.2 | 4.1 | 4.1 | [4.3]$^{C}$ | 3.8 | L | Q | | | | | |
| 31 | | | | | | | | L | C | 4.0 | 4.2 | 4.3 | 4.3 | 4.3$^{N}$ | (4.1)$^{P}$ | 4.1$^{N}$ | (3.9)$^{L}$ | L | L | | | | | |
| Median | | | | | | | | — | 3.4 | 3.8 | 3.9 | 4.0 | 4.2 | 4.1 | 4.0 | 4.0 | 3.7 | 3.2 | — | | | | | |
| Count | | | | | | | | 2 | 15 | 28 | 30 | 31 | 31 | 31 | 31 | 31 | 20 | 8 | | | | | | |

Sweep 1.0 Mc to 25.0 Mc in 0.25 min

Manual ☐ Automatic ☒

# TABLE 75

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form accepted June 1948

## IONOSPHERIC DATA

h'E (Characteristic), Km (Unit), March (Month), 1953

Observed at Washington, D.C.

Lat 38.7°N, Long 77.1°W

75° W Mean Time

National Bureau of Standards (Institution)

Scaled by: F.J.McC., E.J.W.

Calculated by: F.J.McC, E.J.W, N.B.

| Day | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | 120 | (110)A | 110 H | 110 | A | A | (110)A | 110 | 110 | 110 | (120) S | | | | | | |
| 2 | | | | | | | | S K | 120 H K | 110 K | 110 H K | 110 H K | 110 K | 110 K | 110 K | 110 K | 110 K | (110) A K | | | | | | |
| 3 | | | | | | | | S | 110 | 110 | 110 | 110 | 110 | 100 | 110 | 110 | 110 | (130) B | | | | | | |
| 4 | | | | | | | | S | 110 | 110 | 110 | 110 | (100)A | 110 | 110 | 110 | 110 | 110 | | | | | | |
| 5 | | | | | | | | S | 110 | 110 | 110 | 110 | 100 | 110 | 110 | 110 | 110 | 110 | | | | | | |
| 6 | | | | | | | | S | 110 | 110 | 110 | 100 | 110 | 110 | 100 | [110] C | 110 | 110 | | | | | | |
| 7 | | | | | | | | 110 | 110 | 110 | 100 | 110 | 100 | 100 | 110 | 110 | 110 | 110 | | | | | | |
| 8 | | | | | | | | 110 | 110 H | 110 | 110 | 110 K | 100 K | 100 K | 110 K | 110 K | 110 K | 120 K | | | | | | |
| 9 | | | | | | | | (120) S K | 120 H K | 110 K | 110 K | 100 K | 100 K | 100 K | 100 K | 110 K | 110 K | 120 K | 120 K | | | | | |
| 10 | | | | | | | | 110 | 110 H | 110 | 110 K | 100 K | (100) A K | 100 K | 110 K | (120) A K | (120) A K | A K | | | | | | |
| 11 | | | | | | | | 110 K | 110 K | 110 K | 100 K | 110 K | 110 K | 110 H K | 110 H K | 110 H K | 110 K | 120 H K | A | | | | | |
| 12 | | | | | | | | 120 | 110 H | 110 H | 110 H | 110 H | 110 | 110 H | 100 | 110 | 110 | 110 | 120 | | | | | |
| 13 | | | | | | | | (110) S | 110 | 110 | 110 | 110 H | 110 | 100 H | 110 | 110 H | 110 | 120 H | S | | | | | |
| 14 | | | | | | | | S | 110 | 110 | 100 | 100 | 100 H | 100 H | 110 | 110 | 110 | (120) S | 120 | | | | | |
| 15 | | | | | | | | 110 H | 110 | 110 | 100 | 100 | 100 H | 100 | 110 | 110 | 110 | 110 | 120 | | | | | |
| 16 | | | | | | | | (110) S | 110 | 110 | 110 | 100 | 100 | 100 | 100 | 110 | 110 | 110 | S | | | | | |
| 17 | | | | | | | | 110 | 110 | 110 | 110 | 100 | 100 | (100) A | (120) A | 110 | 110 | 110 | S | | | | | |
| 18 | | | | | | | | 110 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 110 | 110 | 110 | S | | | | | |
| 19 | | | | | | | | 110 | 110 | 100 | 100 | 100 | 100 | 100 | (110) A | 100 | 110 | 110 | S | | | | | |
| 20 | | | | | | | | 120 | 100 | 100 | [100] A | (100) A | (100) A | 100 | 100 K | 110 K | 110 K | 110 K | S K | | | | | |
| 21 | | | | | | | | (130) S K | [120] A K | 110 H K | 100 K | 100 K | 100 H K | 100 H K | (110) B K | (110) B K | 110 K | (120) S K | (130) S K | | | | | |
| 22 | | | | | | | | (110) H | [110] A | 110 | 110 | A | A | 100 | [100] A | 100 | 110 | 120 | S | | | | | |
| 23 | | | | | | | | 120 K | 110 K | 110 K | 100 K | 100 K | 110 K | 100 K | 110 K | 110 K | 110 K | (110) S K | S K | | | | | |
| 24 | | | | | | | | 110 K | 110 K | 110 K | 110 K | 110 K | 110 K | 110 K | 110 K | 110 K | 110 H K | (120) S K | (130) S K | | | | | |
| 25 | | | | | | | | 110 H K | 110 K | 110 K | 110 K | 110 K | 100 K | 110 K | 110 K | 110 K | 110 H K | 110 K | S K | | | | | |
| 26 | | | | | | | | 120 | (110) A | 110 | 100 | 100 | 100 | 100 | 110 | 100 | 110 | 110 | S | | | | | |
| 27 | | | | | | | | 110 K | 110 K | 110 K | 100 K | 100 K | 100 K | 100 K | 110 K | 100 K | 110 K | 110 K | (110) S | | | | | |
| 28 | | | | | | | | 110 K | 100 K | 110 K | 100 K | 100 K | 100 K | 110 K | 110 K | 110 K | 110 K | 110 K | S K | | | | | |
| 29 | | | | | | | | 110 | (110) A | 100 | 110 | 110 | 110 | 110 | 110 | 100 | 100 | 120 | S | | | | | |
| 30 | | | | | | | | 120 H | 110 | 110 | 110 | 110 | 100 | 100 | 100 | [100] C | 110 | 110 | S | | | | | |
| 31 | | | | | | | | 110 H | [110] C | 110 | 110 | 110 | 110 | 100 | [100] A | 100 H | 100 H | (110) B | (120) S | | | | | |
| Median | | | | | | | | 110 | 110 | 110 | 110 | 100 | 100 | 100 | 110 | 110 | 110 | 110 | 120 | | | | | |
| Count | | | | | | | | 25 | 31 | 31 | 31 | 29 | 29 | 31 | 31 | 31 | 31 | 30 | 8 | | | | | |

Sweep 1.0 Mc to 25.0 Mc in 0.25 min

Manual ☐ Automatic ☒

# TABLE 76

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form accepted June 1948

## IONOSPHERIC DATA

foE (Characteristic), Mc (Unit), March (Month), 1953

National Bureau of Standards (Institution)

Observed at Washington, D.C.

Scaled by: F. J. McC, E. J. W.

Lat. 38.7°N, Long. 77.1°W — 75°W Mean Time

Calculated by: F. J. McC, E. J. W., N. B.

| Day | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | S | A | 2.5 | (2.8)P | A | A | (3.0)P | 3.0 | 2.8 | 2.5 | 2.0H | | | | | | |
| 2 | | | | | | | | SK | 2.2HK | 2.5K | 2.7HK | 2.9HK | (2.9)SK | 2.9K | 2.8K | 2.5K | 2.2K | 2.0K | | | | | | |
| 3 | | | | | | | | S | A | (2.4)P | 2.7 | 2.9 | 3.0 | 3.0 | 2.9 | 2.7 | 2.5 | 2.1 | | | | | | |
| 4 | | | | | | | | S | 2.2 | 2.6 | 2.8 | 2.9 | 3.0 | (3.1)P | (2.8)P | 2.7 | 2.5 | 2.4 | | | | | | |
| 5 | | | | | | | | S | 2.4 | 2.7 | 2.9 | 3.1 | 3.1 | (2.9)P | 2.9 | 2.7 | 2.5 | 2.0 | | | | | | |
| 6 | | | | | | | | S | 2.3 | 2.7 | (2.9)P | 3.0 | 3.1 | 3.0 | 3.0 | C | 2.5 | A | | | | | | |
| 7 | | | | | | | | 1.8H | 2.2 | 2.5 | 2.7 | 2.9 | 3.0 | 3.0 | 2.9 | 2.8 | 2.4 | 2.0 | | | | | | |
| 8 | | | | | | | | 1.5 | 2.3H | 2.5 | 2.8 | 3.0K | 3.0K | 3.1K | 3.0K | 2.8K | 2.5K | 2.1K | | | | | | |
| 9 | | | | | | | | 1.8K | 2.2HK | 2.3K | (2.5)AK | 2.9K | 3.0K | 3.0K | 2.8K | 2.5K | 2.3K | 2.0K | (1.4)SK | | | | | |
| 10 | | | | | | | | 2.0 | 2.3H | 2.5 | [2.8]AK | 3.0K | [3.0]AK | 3.0K | 2.9K | (2.7)AK | 2.4K | AK | | | | | | |
| 11 | | | | | | | | 1.9K | (2.2)PK | 2.4K | 2.5K | 2.8K | 2.8K | 2.8HK | 2.7HK | 2.7HK | 2.4K | 1.9HK | A | | | | | |
| 12 | | | | | | | | (1.7)S | 2.2H | 2.6H | 2.7H | 2.9H | (3.0)P | 2.9H | 2.9 | 2.8 | 2.5 | 2.1 | (1.3)S | | | | | |
| 13 | | | | | | | | (1.8)S | 2.4 | 2.6 | 2.8 | 3.0H | 3.1 | 3.0H | 3.0 | 2.8H | 2.6 | 2.3H | S | | | | | |
| 14 | | | | | | | | S | 2.2 | 2.5 | (2.7)P | (2.8)P | (2.9)P | 3.0H | 2.9 | 2.8 | 2.6 | 2.1H | S | | | | | |
| 15 | | | | | | | | S | 2.1 | 2.5 | (2.7)P | (2.8)P | (3.0)B | 2.9 | 2.9 | 2.8 | 2.6 | 2.2 | S | | | | | |
| 16 | | | | | | | | 1.9 | 2.3 | 2.7 | 2.8 | 2.0 | 3.1 | 3.0 | 3.0 | 2.9 | 2.5 | 2.1 | S | | | | | |
| 17 | | | | | | | | S | 2.2 | 2.6 | 2.8 | 3.0 | 3.1 | 3.2 | 3.1 | 2.9 | 2.6 | 2.2 | S | | | | | |
| 18 | | | | | | | | 1.6 | 2.2 | 2.3 | 2.8 | 3.0 | 3.1 | 3.2 | 3.0 | 2.9 | 2.7 | 2.2 | S | | | | | |
| 19 | | | | | | | | 1.9 | 2.4 | 2.7 | 3.0 | 3.0 | 3.2 | 3.1 | 3.0 | 2.9 | 2.6 | 2.1 | 1.8 | | | | | |
| 20 | | | | | | | | 1.8 | 2.3 | 2.6 | [2.8]C | (3.0)P | [3.0]A | 3.0 | 3.0K | 2.9K | (2.6)PK | 2.1K | SK | | | | | |
| 21 | | | | | | | | 1.8K | [2.2]AK | 2.5HK | 2.5K | 2.9K | 3.0K | (2.9)PK | (2.7)BK | (2.7)BK | (2.5)PK | 2.0K | 1.7K | | | | | |
| 22 | | | | | | | | (1.8)P | [2.2]A | 2.5 | (2.6)A | A | A | 3.0 | [2.8]A | 2.7 | (2.5)S | 2.1 | S | | | | | |
| 23 | | | | | | | | 2.1K | 2.4K | 2.5K | [2.6]AK | (2.8)PK | (2.8)SK | 2.9K | 2.8K | (2.7)CK | 2.5K | (2.2)PK | AK | | | | | |
| 24 | | | | | | | | 1.9K | 2.3K | 2.6K | 2.8K | [2.9]BK | (3.0)PK | 3.0K | 3.0K | 2.9K | 2.5HK | 2.2HK | (1.8)PK | | | | | |
| 25 | | | | | | | | 1.9HK | 2.2K | (2.5)SK | 2.7K | (2.8)PK | 3.1K | 3.0K | (2.9)PK | 2.7K | 2.5HK | 2.1K | SK | | | | | |
| 26 | | | | | | | | 2.0 | [2.4]A | (2.7)P | (2.8)P | 3.1 | 3.1 | (3.0)P | 3.0 | 2.8 | 2.6 | 2.2 | S | | | | | |
| 27 | | | | | | | | 2.0K | 2.4K | 2.7K | 2.9K | 3.0K | 3.0K | 3.0K | 3.0K | 2.8K | 2.5K | 2.2K | S | | | | | |
| 28 | | | | | | | | (2.0)PK | 2.4K | 2.7K | (2.8)PK | 3.0K | 3.0K | 3.1K | 3.0K | 2.8K | 2.6K | 2.2K | 1.7K | | | | | |
| 29 | | | | | | | | 2.0 | 2.4 | 2.6 | 2.8 | (3.0)P | 3.2 | (3.2)P | 3.0 | 3.0 | 2.7 | 2.3 | S | | | | | |
| 30 | | | | | | | | 2.1H | 2.4 | 2.6 | (2.8)P | (3.0)P | 3.1 | 3.1 | 3.0 | [2.8]C | 2.7 | 2.3 | S | | | | | |
| 31 | | | | | | | | 2.1H | [2.3]C | (2.5)P | (2.9)B | 3.2 | 3.2 | 3.2 | [3.0]A | (2.9)P | (2.7)P | (2.2)B | S | | | | | |
| Median | | | | | | | | 1.9 | 2.3 | 2.5 | 2.8 | 3.0 | 3.0 | 3.0 | 3.0 | 2.8 | 2.5 | 2.1 | 1.7 | | | | | |
| Count | | | | | | | | 22 | 29 | 31 | 31 | 29 | 29 | 31 | 31 | 30 | 31 | 29 | 6 | | | | | |

Sweep 1.0 Mc to 25.0 Mc in 0.25 min

Manual ☐ Automatic ☒

# TABLE 77

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form accepted June 1948

32

## IONOSPHERIC DATA

Es (Characteristic), Mc,Km (Unit) March (Month), 1953

National Bureau of Standards (Institution)

Observed at Washington, D.C.

Scaled by: F.J.McC., E.J.W.

Lat 38.7°N, Long 77.1°W 75°W Mean Time

Calculated by: F.J.McC., E.J.W., N.B.

| Day | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | E | E | E | 22/110 | E | E | E | G | 22/110 | 32Y/110 | 33/110 | 49/100 | 39Y/100 | 27/100 | G | G | G | G | E | E | E | E | E | E |
| 2 | E | E | E | E | E | E | E | 19M/120 | G | G | G | G | G | G | G | G | G | 23M/110 | 27Y/120 | 30Y/120 | 24Y/120 | E | E | E |
| 3 | 39/120 | E | 33Y/100 | E | E | E | E | G | 28M/120 | 39Y/110 | G | G | G | G | G | G | G | G | E | E | E | E | E | E |
| 4 | E | E | E | E | E | E | E | G | G | G | G | G | 30/100 | G | G | G | G | G | E | E | E | E | E | E |
| 5 | E | E | E | E | E | E | E | G | G | G | G | G | G | G | G | G | G | 22/130 | E | E | E | E | E | E |
| 6 | E | E | 39/110 | E | E | E | E | G | G | G | G | G | G | G | G | C | 44Y/120 | 24/120 | E | E | E | E | E | E |
| 7 | E | 24Y/130 | E | 22/160 | E | E | E | G | G | G | G | G | G | G | G | G | G | G | E | E | E | E | E | 28Y/120 |
| 8 | 38/110 | E | E | E | E | E | E | 19/140 | G | G | G | 29/110 | G | 74Y/120 | G | G | G | G | E | E | E | E | E | E |
| 9 | E | 23/120 | E | 23Y/110 | 24Y/110 | 40Y/110 | E | G | G | 25/120 | 32/120 | G | G | G | G | G | G | G | G | E | E | E | E | E |
| 10 | E | 24Y/120 | 38/110 | 30/110 | 29/110 | 22/110 | 28/100 | G | G | G | 27/130 | 28/100 | 36Y/100 | G | 28/100 | 32Y/100 | 20/100 | 26M/100 | E | E | E | E | E | E |
| 11 | E | E | E | E | E | E | E | G | 22/120 | G | 69Y/110 | G | G | 42Y/120 | 44Y/120 | 39Y/120 | 27/120 | 21/130 | 19/120 | E | E | E | E | E |
| 12 | E | 22Y/110 | 29/110 | E | E | E | E | G | G | G | G | G | G | G | G | G | G | G | G | E | E | 25/110 | E | E |
| 13 | 21Y/110 | E | E | E | 22/110 | E | E | G | G | G | G | G | G | G | G | G | G | G | 18M/100 | E | E | E | E | E |
| 14 | E | E | E | E | E | E | E | G | G | G | G | G | G | G | G | G | G | 33Y/120 | G | E | E | E | E | E |
| 15 | E | E | E | E | E | E | E | 22/140 | G | G | G | G | G | G | G | G | G | G | G | E | E | 30/110 | 39Y/110 | E |
| 16 | E | E | E | E | E | 43Y/110 | E | G | G | G | G | G | G | G | G | G | G | G | G | E | 24Y/110 | E | E | E |
| 17 | E | E | E | E | E | E | E | 26/120 | G | G | G | G | G | 27/100 | 37Y/100 | G | G | G | G | E | E | E | E | E |
| 18 | E | E | E | E | E | E | E | G | G | G | G | G | G | G | G | G | G | G | G | E | E | E | E | E |
| 19 | 22/100 | E | E | E | E | E | E | 19Y/110 | 32Y/110 | G | G | 31/120 | G | G | 21/100 | G | G | G | G | E | E | 22/110 | 23/110 | 24/110 |
| 20 | 28Y/100 | 43/100 | 42/103 | 37/100 | 22Y/110 | 24/100 | 26Y/100 | G | 35Y/110 | G | 27/100 | 35Y/100 | 38/100 | G | G | G | G | G | G | E | E | E | E | E |
| 21 | E | E | E | E | E | E | 49Y/100 | G | 37/110 | 38/120 | G | G | G | G | G | G | G | G | G | E | E | 24/100 | E | E |
| 22 | E | E | (23)5/110 | E | E | E | 27/150 | G | 25M/110 | G | 28/120 | 29/110 | 30/110 | G | 29/100 | 29/110 | 34/120 | G | G | E | E | E | E | E |
| 23 | E | E | E | E | E | E | 42/130 | G | G | 44Y/110 | 43Y/110 | G | G | G | G | G | G | G | 19/130 | E | 25/110 | E | E | E |
| 24 | E | E | E | F | E | E | E | 71Y/130 | G | G | G | G | G | G | G | G | G | G | G | E | E | 21/110 | E | 30/110 |
| 25 | E | 34Y/110M | E | E | E | E | E | G | G | G | G | 48Y/100 | G | G | G | G | G | G | G | E | 28Y/110 | E | E | E |
| 26 | E | E | E | E | E | E | E | G | 25/110 | 26/110 | G | G | G | G | G | G | G | G | G | 24Y/110 | E | E | E | E |
| 27 | E | E | E | E | E | E | E | G | G | G | G | G | G | G | G | G | G | G | G | E | E | E | E | E |
| 28 | E | E | E | E | E | E | E | G | G | G | 28/110 | G | G | G | G | G | G | G | G | E | E | (23)5/110 | E | E |
| 29 | E | E | E | E | E | E | E | 72Y/120 | 25/110 | 29M/120 | 31/120 | G | G | G | G | G | G | 18/100 | G | E | E | 23/110 | E | E |
| 30 | E | E | E | 13/100 | E | E | E | G | G | G | G | G | G | 60/120 | 43/120 | C | G | G | G | E | E | E | E | E |
| 31 | E | E | E | E | E | E | E | 74Y/110 | C | 33/110 | 28/100 | G | G | G | 32Y/100M | G | G | G | G | E | E | E | E | E |
| Median | ** | ** | ** | ** | ** | ** | ** | ** | ** | ** | ** | ** | ** | ** | ** | ** | ** | ** | ** | ** | ** | ** | ** | ** |
| Count | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 30 | 31 | 31 | 31 | 31 | 31 | 31 | 29 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 |

** MEDIAN fEs LESS THAN MEDIAN foE, OR LESS THAN LOWER FREQUENCY LIMIT OF RECORDER.

Sweep 1.0 Mc to 25.0 Mc in 0.25 min

Manual ☐ Automatic ☒

# TABLE 78

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form accepted June 1946

## IONOSPHERIC DATA

(M15000)F2 (Characteristic) ____ (Unit) March (Month), 1953

National Bureau of Standards (Institution)

Observed at Washington, D.C.

Scaled by: F.J. McC., E.J.W.

Lat 38.7°N, Long 77.1°W

75°W Mean Time

Calculated by: F.J. McC., E.J.W., N.B.

| Day | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2.1 | 2.0 | 2.0 | 1.9 | 2.0 | 2.1$^{F}$ | 2.0$^{F}$ | 2.3 | 2.6 | 2.4 | 2.4 | 2.2 | 2.3 | 2.2 | 2.2 | 2.3 | 2.3 | 2.4 | 2.4 | 2.0 | 2.2 | 2.0$^{F}$ | 2.0$^{F}$ | 2.0$^{F}_{K}$ |
| 2 | 2.1$^{F}_{K}$ | $^{J}$(1.9)$^{F}_{K}$ | $^{J}$(1.5)$^{S}_{K}$ | $^{D}$(1.9)$^{S}_{K}$ | F$^{S}_{K}$ | E$^{K}$ | F$^{K}$ | 2.1$^{K}$ | G$^{K}$ | G$^{K}$ | G$^{K}$ | G$^{K}$ | G$^{K}$ | G$^{K}$ | G$^{K}$ | G$^{K}$ | 2.1$^{K}$ | 2.0$^{K}$ | 1.9$^{K}$ | $^{F}$(2.0)$^{S}_{K}$ | 1.9$^{F}_{K}$ | 2.0$^{F}_{K}$ | F$^{S}_{K}$ | $^{F}$(1.9)$^{S}_{K}$ |
| 3 | 2.1$^{J}_{S}$ | 2.0$^{F}$ | 2.0$^{F}$ | 2.0$^{F}$ | (2.0)$^{F}_{S}$ | (2.1)$^{J}_{S}$ | F$^{S}$ | 2.2$^{F}_{S}$ | 2.4 | 2.3 | (2.2)$^{H}$ | 2.2 | 2.3 | 2.3 | 2.3 | 2.2 | 2.2 | 2.5 | 2.3 | 2.4 | 2.3 | 2.1$^{F}$ | 2.1$^{F}$ | 2.3 |
| 4 | 1.9 | 2.0$^{F}$ | 2.1$^{F}$ | 2.2$^{F}$ | 2.1$^{F}$ | 2.1$^{F}$ | 2.1$^{F}$ | 2.5 | 2.7 | 2.4 | 2.5 | 2.1 | 2.2 | 2.4 | 2.3 | 2.4 | 2.3 | 2.4 | 2.4 | 2.2 | 2.2 | 2.2 | 2.1 | 2.0 |
| 5 | 2.0 | 2.1 | 2.1 | 2.1 | 2.2 | 2.2 | 2.3 | 2.3 | 2.4 | 2.5 | 2.4 | 2.3 | 2.3 | 2.2 | 2.3 | 2.3 | 2.4 | 2.4 | 2.4 | 2.3 | 2.3 | 2.3 | 2.1 | 2.1 |
| 6 | 2.0$^{F}$ | 2.1$^{F}$ | 2.0$^{F}$ | 2.1$^{F}$ | 2.1 | 2.2 | 2.4 | 2.5 | 2.5 | (2.7)$^{H}$ | 2.1 | 2.0 | 2.4$^{H}$ | 2.2 | 2.3 | C | 2.4 | 2.5 | 2.3 | (2.1)$^{J}_{S}$ | (2.0)$^{J}_{S}$ | (2.2)$^{J}_{S}$ | 2.0 | 2.0 |
| 7 | 2.2 | 2.2 | 1.9 | 1.9 | 1.9 | 2.0$^{F}$ | 2.2$^{F}$ | 2.4 | (2.3)$^{J}_{S}$ | 2.3 | G | 1.9 | 1.8 | 2.0 | 2.1 | 2.1 | 2.2 | 2.4 | 2.3 | 2.1 | 2.1 | 2.0$^{F}$ | 2.0$^{F}$ | (2.0)$^{F}$ |
| 8 | (1.9)$^{A}_{F}$ | (2.1)$^{J}_{F}$ | (2.0)$^{J}_{F}$ | 2.0$^{F}$ | 2.0$^{F}$ | 2.0$^{F}_{C}$ | 2.0$^{F}$ | 2.3 | 2.2 | 2.2 | 2.3 | 2.0$^{K}$ | 2.1$^{K}$ | 2.1$^{K}$ | 2.1$^{K}$ | 2.1$^{K}$ | 2.2$^{K}$ | 2.1$^{K}$ | 1.9$^{K}$ | 1.7$^{K}$ | $^{J}$(1.9)$^{S}_{K}$ | $^{J}$(1.9)$^{S}_{K}$ | $^{J}$2.1$^{F}_{K}$ | 1.7$^{K}$ |
| 9 | 1.8$^{K}$ | $^{J}$(1.8)$^{S}_{K}$ | $^{J}$(2.0)$^{S}_{K}$ | 2.2$^{F}_{K}$ | 1.8$^{F}_{K}$ | 1.9$^{F}_{K}$ | 1.9$^{K}$ | 2.2$^{K}$ | G$^{K}$ | G$^{K}$ | G$^{K}$ | G$^{K}$ | G$^{K}$ | 1.8$^{K}$ | 2.1$^{K}$ | 1.8$^{K}$ | 1.9$^{K}$ | 2.0$^{K}$ | 2.0$^{K}$ | 2.0$^{K}$ | 2.0$^{F}_{K}$ | 2.0$^{K}$ | 1.9$^{K}$ | 2.0 |
| 10 | (2.1)$^{J}_{F}$ | 1.9 | (1.9)$^{A}$ | 2.0 | A | 2.1 | 2.0 | 2.3 | 2.2 | 2.1 | 1.8$^{K}$ | 1.9$^{K}$ | 1.8$^{K}$ | 1.9$^{K}$ | 1.9$^{K}$ | 2.0$^{K}$ | 2.2$^{K}$ | 2.1$^{K}$ | 2.2 | 2.2 | 2.1 | 2.0$^{F}$ | 2.0$^{F}$ | 1.9$^{F}$ |
| 11 | 2.0 | (2.0)$^{F}$ | (1.9)$^{J}_{S}$ | (2.0)$^{J}_{S}$ | 1.9 | (1.9)$^{J}_{S}$ | $^{J}$(2.0)$^{S}_{K}$ | 2.3$^{K}$ | G$^{K}$ | 1.9$^{K}$ | G$^{K}$ | $^{J}$(2.1)$^{H}_{K}$ | 1.7$^{K}$ | 2.2$^{K}$ | 2.0$^{K}$ | 2.2$^{K}$ | 2.2$^{K}$ | 2.3$^{K}$ | 2.3 | 2.2 | 2.1 | 2.0 | 2.1 | 2.1 |
| 12 | 2.0 | (2.0)$^{J}_{S}$ | 2.0 | 2.0 | 2.1 | 2.1 | 2.1 | 2.4 | 2.2 | 2.1 | 1.9 | 2.2 | 2.3 | 2.2 | 2.1 | 2.0$^{H}$ | 2.1 | 2.4 | 2.3 | 2.2 | 2.1 | 2.1 | 2.1 | 2.1 |
| 13 | 2.0 | 2.0 | 2.0 | 2.0 | 2.1$^{F}$ | 2.2$^{F}$ | 2.1 | 2.2$^{H}$ | 2.2$^{H}$ | 2.4 | 2.2$^{H}$ | 1.9$^{H}$ | 2.4$^{H}$ | (2.4)$^{J}_{S}$ | 2.3 | 2.3 | 2.3 | 2.4 | 2.4 | 2.3 | 2.1 | 2.1 | 2.2 | 2.1 |
| 14 | 2.0 | 2.1 | (2.1)$^{J}_{S}$ | (2.2)$^{J}$ | 2.1 | 2.0 | 2.1 | 2.3 | 2.3 | 2.2 | 2.1$^{H}$ | 2.2 | 2.2 | 2.4 | 2.2 | 2.3 | 2.4 | 2.3 | 2.4 | 2.3 | 2.3 | 2.1 | (2.1)$^{J}_{S}$ | (2.0)$^{J}_{S}$ |
| 15 | 2.1 | 2.1 | (2.0)$^{J}_{S}$ | 2.1 | 2.2 | 2.0 | 2.3 | 2.3 | 2.5 | 2.0 | 2.0 | 2.2 | 2.3 | 2.3 | 2.3 | 2.3 | 2.2 | 2.4 | 2.4 | 2.2 | 2.2 | 1.9 | 2.1 | 2.0 |
| 16 | 2.0 | 2.1 | 2.0 | 2.1 | 2.1 | 2.1 | 2.2 | 2.4 | 2.4 | 2.3 | 2.2 | 2.2 | 2.3 | 2.1 | 2.2 | 2.4 | 2.3 | 2.3 | 2.3 | 2.3 | 2.1 | 2.0 | 2.2 | 2.1 |
| 17 | 1.9 | 2.0$^{F}$ | 1.9 | 2.1$^{F}$ | 2.0$^{F}$ | (2.2)$^{S}$ | 2.2 | 2.4 | 2.4 | 2.3 | 2.2 | 2.3 | 2.2 | 2.2 | 2.2 | 2.2 | 2.3 | 2.4 | 2.4 | 2.6 | 2.2 | 2.0 | 2.2 | 1.9 |
| 18 | 2.2 | 2.2 | 2.0$^{F}$ | 2.0$^{F}$ | 2.2 | 2.2$^{F}$ | 2.3 | 2.4 | 2.5$^{H}$ | 2.3 | 2.0 | 2.3 | 2.2 | 2.2 | 2.3 | 2.2 | 2.4 | 2.3 | 2.3 | 2.2 | 2.2 | 2.0 | (2.1)$^{J}_{S}$ | 2.0 |
| 19 | 2.0 | (2.0)$^{J}_{S}$ | 2.0 | 2.0 | 1.9 | 2.1 | 2.2 | 2.4 | 2.1 | 2.1 | 2.1 | 1.9 | 2.2 | 2.3 | 2.3 | 2.3 | 2.2 | 2.3 | 2.2 | 2.2 | 2.1 | 1.9 | 2.0 | 2.0 |
| 20 | 2.0 | A | A | 2.0$^{F}$ | 2.1 | 2.1$^{F}$ | 2.3 | 2.4$^{H}$ | 2.4 | 2.2 | 2.3 | 2.3 | 2.2 | 2.3 | 2.1$^{K}$ | 2.3$^{K}$ | 2.1$^{K}$ | (2.2)$^{S}_{K}$ | 2.4$^{K}$ | 2.2$^{K}$ | 2.2$^{K}$ | 2.2$^{K}$ | 2.1$^{K}$ | 2.0$^{K}$ |
| 21 | 1.9$^{K}$ | 2.0$^{K}$ | 1.9$^{K}$ | 2.2$^{K}$ | $^{D}$(2.3)$^{S}_{K}$ | $^{J}$(1.9)$^{S}_{K}$ | 2.1$^{K}$ | 2.2$^{K}$ | $^{D}$(1.9)$^{S}_{K}$ | G$^{K}$ | G$^{K}$ | G$^{K}$ | G$^{K}$ | G$^{K}$ | 1.7$^{K}$ | 1.7$^{H}$ | 1.8$^{K}$ | 2.0$^{K}$ | 2.2$^{K}$ | 2.1$^{K}$ | $^{J}$(2.1)$^{S}_{K}$ | 2.0$^{F}_{K}$ | $^{D}$(1.9)$^{S}_{K}$ | (2.0)$^{J}_{S}$ |
| 22 | (1.9)$^{D}_{S}$ | FS | 2.0$^{S}$ | 2.2 | (2.1)$^{D}_{S}$ | (2.1)$^{D}_{S}$ | 2.2 | 2.4 | 2.4 | 2.1 | 2.1 | 2.0 | 2.1 | 2.0 | 2.3 | 2.0 | 2.0 | 2.1 | 2.3 | 2.1 | $^{J}$(2.1)$^{S}_{K}$ | 2.2$^{F}_{K}$ | 2.0$^{K}$ | F$^{K}$ |
| 23 | E$^{K}$ | E$^{K}$ | S$^{F}_{K}$ | 2.0$^{K}$ | $^{S}$2.2$^{F}_{K}$ | S$^{K}$ | 2.2$^{K}$ | 2.5$^{K}$ | G$^{K}$ | G$^{K}$ | G$^{K}$ | G$^{K}$ | G$^{K}$ | G$^{K}$ | G$^{K}$ | G$^{K}$ | 2.0$^{K}$ | G$^{K}$ | 2.1$^{K}$ | 2.1$^{K}$ | 2.0$^{K}$ | $^{F}$2.2$^{S}_{K}$ | $^{J}$(1.9)$^{S}_{K}$ | $^{J}$(1.9)$^{F}_{K}$ |
| 24 | 2.0$^{K}$ | 1.9$^{F}_{K}$ | $^{S}$(2.0)$^{F}_{K}$ | F$^{K}$ | 1.9$^{F}_{K}$ | F$^{K}$ | 2.1$^{K}$ | 2.1$^{K}$ | $^{H}$2.1$^{F}_{K}$ | 1.9$^{K}$ | 2.0$^{K}$ | 1.8$^{K}$ | 1.9$^{K}$ | 1.8$^{K}$ | 1.9$^{K}$ | 2.0$^{K}$ | 1.9$^{K}$ | 2.0$^{K}$ | 1.9$^{K}$ | 2.1$^{K}$ | 2.1$^{K}$ | $^{J}$(2.2)$^{F}_{K}$ | $^{J}$(2.0)$^{S}_{K}$ | A$^{K}$ |
| 25 | F$^{S}_{K}$ | $^{J}$(1.9)$^{S}_{K}$ | $^{J}$(2.0)$^{S}_{K}$ | S$^{K}$ | S$^{K}$ | F$^{S}_{K}$ | (2.0)$^{S}_{K}$ | 2.5$^{H}_{K}$ | 2.4$^{K}$ | G$^{K}$ | G$^{K}$ | 1.9$^{K}$ | 1.8$^{H}_{K}$ | 1.9$^{K}$ | 1.8$^{K}$ | 2.1$^{K}$ | 2.1$^{K}$ | 2.1$^{K}$ | 2.3$^{K}$ | 2.0$^{K}$ | (2.1)$^{S}_{K}$ | 2.0$^{K}$ | $^{J}$(2.0)$^{F}_{K}$ | $^{F}$(2.0)$^{S}_{K}$ |
| 26 | $^{J}$(1.9)$^{S}_{K}$ | $^{J}$(1.9)$^{S}_{K}$ | $^{J}$(1.9)$^{S}_{K}$ | $^{J}$(1.9)$^{S}_{K}$ | $^{J}$(1.9)$^{S}_{K}$ | (2.1)$^{J}_{F}$ | 2.3 | 2.4 | 2.2 | 2.1 | 2.3 | 2.1 | 2.2 | 2.2 | 2.3 | 2.2 | 2.2 | 2.2 | 2.3 | 2.2 | 2.2 | 2.2 | 2.1$^{F}$ | 2.0 |
| 27 | 2.0$^{F}$ | 2.2$^{F}$ | 1.9 | 1.9$^{F}$ | $^{D}$(1.8)$^{S}_{K}$ | 1.9$^{F}_{K}$ | 2.3$^{K}$ | 2.3$^{K}$ | G$^{K}$ | G$^{K}$ | G$^{K}$ | G$^{K}$ | 1.8$^{K}$ | 1.8$^{K}$ | 2.0$^{K}$ | 2.0$^{K}$ | 2.0$^{K}$ | 2.2$^{K}$ | 2.2 | 2.3 | 2.1 | 2.0$^{F}$ | 1.9$^{F}$ | 2.0 |
| 28 | (2.1)$^{J}_{F}$ | (2.0)$^{J}_{S}$ | (1.9)$^{J}_{S}$ | (2.1)$^{J}_{S}$ | (1.9)$^{J}_{S}$ | (1.9)$^{J}_{S}$ | 2.2$^{K}$ | G$^{K}$ | G$^{K}$ | G$^{K}$ | G$^{K}$ | G$^{K}$ | G$^{K}$ | 1.9$^{K}$ | 2.0$^{K}$ | 2.0$^{K}$ | 2.0$^{K}$ | 2.1$^{K}$ | 2.1$^{K}$ | (2.1)$^{S}$ | (1.9)$^{S}$ | 2.0 | 2.0 | 2.0 |
| 29 | 2.0 | S | 2.1 | 2.0 | (1.9)$^{J}_{S}$ | (1.9)$^{J}_{S}$ | 2.2 | 2.2 | G | G | 2.0 | 2.1 | 2.0 | 2.2 | 2.2 | 2.1 | 2.2 | 2.3 | 2.2 | 2.0 | 2.1 | 2.0 | 2.0 | 2.0 |
| 30 | 2.0$^{F}_{S}$ | 1.9$^{F}$ | 2.0$^{F}$ | 2.1 | (2.0)$^{J}_{S}$ | 1.9 | 2.2 | 2.2 | 2.2 | 2.0 | 2.1 | 1.9 | 1.9 | 1.9 | 2.2 | C | 2.2 | 2.2 | 2.2 | 2.0 | 2.1 | 2.0 | 2.0 | 2.0 |
| 31 | 2.0 | 2.0 | 2.0 | 2.1 | 2.0 | 2.0 | 2.2 | 2.2 | C | 2.2 | 2.0 | 2.0 | 2.1 | 2.2 | 2.3 | 2.2 | 2.3 | 2.2 | 2.3 | 2.1 | 2.1 | 2.0 | 2.1 | (2.1)$^{J}_{S}$ |
| Median | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.1 | 2.2 | 2.3 | 2.2 | 2.1 | 2.0 | 2.0 | 2.1 | 2.2 | 2.2 | 2.2 | 2.2 | 2.3 | 2.3 | 2.2 | 2.1 | 2.0 | 2.0 | 2.0 |
| Count | 29 | 27 | 29 | 24 | 28 | 27 | 29 | 31 | 30 | 31 | 31 | 31 | 31 | 31 | 31 | 29 | 31 | 31 | 31 | 31 | 31 | 31 | 30 | 29 |

Sweep 1.0 Mc to 25.0 Mc in 0.25 min

Manual ☐ Automatic ☒

# TABLE 79

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form accepted June 1946

# IONOSPHERIC DATA

(M3000)F2, ____ March, 1953
(Characteristic) (Unit) (Month)

National Bureau of Standards
(Institution)

Observed at Washington, D.C.

Lat. 38.7°N, Long 77.1°W

75°W Mean Time

Scaled by: F. J. McC., E. J. W.

Calculated by: F.J.McC., E.J.W., N.B.

| Day | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 31 | 30 | 30 | 29 | 30 | 31$^{F}$ | 30$^{F}$ | 34 | 36 | 35 | 35 | 32 | 34 | 32 | 32 | 33 | 33 | 34 | 35 | 30 | 32 | 30$^{F}$ | 30$^{F}$ | 29$^{F}_{K}$ |
| 2 | 31$^{F}_{K}$ | $^{K}$(29)$^{J}_{F}$ | $^{K}$(27)$^{J}_{S}$ | $^{K}$(28)$^{P}_{S}$ | F$^{S}_{K}$ | E$^{K}$ | F$^{K}$ | 31$^{K}$ | G$^{K}$ | G$^{K}$ | G$^{K}$ | G$^{K}$ | G$^{K}$ | G$^{K}$ | G$^{K}$ | G$^{K}$ | 31$^{K}$ | 30$^{K}$ | 29$^{K}$ | $^{K}$(30)$^{F}_{S}$ | 29$^{F}_{K}$ | 29$^{F}_{K}$ | F$^{S}_{K}$ | $^{K}$(28)$^{F}_{S}$ |
| 3 | (31)$^{J}_{S}$ | 30$^{F}$ | 30$^{F}$ | 30$^{F}$ | (29)$^{F}_{S}$ | (31)$^{J}_{S}$ | F$^{S}$ | 32$^{F}_{S}$ | 34 | 33 | (32)$^{H}$ | 32 | 33 | 33 | 34 | 32 | 32 | 35 | 34 | 35 | 33 | 31$^{F}$ | 31$^{F}$ | 34 |
| 4 | 29 | 30$^{F}$ | 31$^{F}$ | 32$^{F}$ | 31$^{F}$ | 31$^{F}$ | 31$^{F}$ | 35 | 38 | 35 | 35 | 31 | 32 | 34 | 33 | 34 | 33 | 34 | 35 | 32 | 32 | 32 | 31 | 30 |
| 5 | 30 | 31 | 31 | 31 | 32 | 32 | 33 | 34 | 35 | 36 | 35 | 33 | 33 | 32 | 34 | 34 | 35 | 34 | 34 | 34 | 33 | 32 | 31 | 31 |
| 6 | 30$^{F}$ | 31$^{F}$ | 30$^{F}$ | 31$^{F}$ | 31 | 32 | 34 | 35 | 36 | (37)$^{H}$ | 31 | 30 | 34$^{H}$ | 32 | 34 | C | 34 | 35 | 34 | (31)$^{J}_{S}$ | (30)$^{J}_{S}$ | (32)$^{J}_{S}$ | 30 | 30 |
| 7 | 32 | 32 | 29 | 29 | 29 | 30$^{F}$ | 32$^{F}$ | 35 | (32)$^{J}_{S}$ | 33 | G | 29 | 28 | 30 | 31 | 31 | 32 | 34 | 33 | 31 | 31 | 30$^{F}$ | 30$^{F}$ | (30)$^{F}$ |
| 8 | (28)$^{A}_{F}$ | (31)$^{J}_{F}$ | (30)$^{J}_{F}$ | 30$^{F}$ | 30$^{F}$ | 30$^{F}_{S}$ | 30$^{F}$ | 34 | 32 | 32 | 33 | 30$^{K}$ | 31$^{K}$ | 31$^{K}$ | 31$^{K}$ | 31$^{K}$ | 32$^{K}$ | 31$^{K}$ | 29$^{K}$ | 26$^{K}$ | $^{K}$(29)$^{J}_{S}$ | $^{K}$(29)$^{J}_{S}$ | $^{K}$31$^{2}_{F}$ | 26$^{K}$ |
| 9 | 28$^{K}$ | $^{K}$(27)$^{J}_{S}$ | $^{K}$(29)$^{J}_{S}$ | 32$^{F}_{K}$ | 28$^{F}_{K}$ | 29$^{F}_{K}$ | 29$^{K}$ | 32$^{K}$ | G$^{K}$ | G$^{K}$ | G$^{K}$ | G$^{K}$ | G$^{K}$ | 28$^{K}$ | 31$^{K}$ | 27$^{K}$ | 28$^{K}$ | 30$^{K}$ | 30$^{K}$ | 29$^{K}$ | 30$^{F}_{K}$ | 30$^{K}$ | 29$^{K}$ | 30 |
| 10 | (31)$^{J}_{F}$ | 29 | (28)$^{A}$ | 30 | A | 31 | 30 | 33 | 32 | 31 | 27$^{K}$ | 29$^{K}$ | 28$^{K}$ | 29$^{K}$ | 29$^{K}$ | 30$^{K}$ | 32$^{K}$ | 31$^{K}$ | 32 | 32 | 31 | 30$^{F}$ | 30$^{F}$ | 29$^{F}$ |
| 11 | 30 | (30)$^{F}$ | (29)$^{J}_{S}$ | (29)$^{J}_{S}$ | 28 | (29)$^{J}_{S}$ | $^{K}$(30)$^{J}_{S}$ | 33$^{K}$ | G$^{K}$ | 29$^{K}$ | G$^{K}$ | $^{K}$(31)$^{J}_{H}$ | 26$^{K}$ | 32$^{K}$ | 30$^{K}$ | 32$^{K}$ | 33$^{K}$ | 34$^{K}$ | 33 | 32 | 31 | 30 | 31 | 31 |
| 12 | 30 | (30)$^{J}_{S}$ | 30 | 30 | 31 | 31 | 31 | 35 | 32 | 32 | 29 | 32 | 34 | 32 | 31 | 30$^{H}$ | 31 | 34 | 34 | 32 | 31 | 31 | 31 | 31 |
| 13 | 30 | 30 | 30 | 30 | 31$^{F}$ | 32$^{F}$ | 31 | 32$^{H}$ | 32$^{H}$ | 35 | 32$^{H}$ | 29$^{H}$ | 35$^{H}$ | (35)$^{J}_{S}$ | 33 | 33 | 34 | 34 | 34 | 34 | 31 | 32 | 32 | 31 |
| 14 | 30 | 31 | (31)$^{J}_{S}$ | (32)$^{J}_{S}$ | 31 | 30 | 31 | 33 | 33 | 32 | 31$^{H}$ | 33 | 33 | 34 | 32 | 34 | 34 | 33 | 35 | 33 | 33 | 32 | (31)$^{J}_{S}$ | (30)$^{J}_{S}$ |
| 15 | 31 | 31 | (30)$^{J}_{S}$ | 31 | 32 | 29 | 33 | 33 | 36 | 30 | 30 | 33 | 33 | 33 | 34 | 34 | 32 | 35 | 34 | 32 | 32 | 29 | 31 | 30 |
| 16 | 30 | 31 | 30 | 31 | 31 | 31 | 32 | 35 | 34 | 33 | 32 | 32 | 34 | 31 | 32 | 34 | 34 | 33 | 34 | 33 | 31 | 30 | 32 | 31 |
| 17 | 28 | 30$^{F}$ | 29 | 31$^{F}$ | 30$^{F}$ | (32)$^{S}$ | 32 | 34 | 35 | 34 | 32 | 33 | 32 | 32 | 32 | 32 | 33 | 34 | 35 | 36 | 32 | 30 | 32 | 29 |
| 18 | 32 | 32 | 30$^{F}$ | 30$^{F}$ | 32 | 32$^{F}$ | 33 | 35 | 35$^{H}$ | 33 | 30 | 34 | 32 | 32 | 33 | 32 | 35 | 34 | 34 | 32 | 32 | 30 | (31)$^{J}_{S}$ | 30 |
| 19 | 30 | (30)$^{J}_{S}$ | 30 | 30 | 29 | 31 | 32 | 34 | 31 | 31 | 31 | 29 | 32 | 33 | 33 | 33 | 32 | 33 | 32 | 32 | 31 | 29 | 30 | 30 |
| 20 | 30 | A | A | 30$^{F}$ | 31 | 31$^{F}$ | 34 | 34$^{H}$ | 34 | 34 | 33 | 33 | 32 | 33 | 31$^{K}$ | 33$^{K}$ | 31$^{K}$ | (32)$^{S}_{K}$ | 34$^{K}$ | 32$^{K}$ | 32$^{K}$ | 32$^{K}$ | 31$^{K}$ | 30$^{K}$ |
| 21 | 29$^{K}$ | 30$^{K}$ | 29$^{K}$ | 32$^{K}$ | $^{K}$(34)$^{P}_{S}$ | $^{K}$(29)$^{J}_{S}$ | 31$^{K}$ | 32$^{K}$ | $^{K}$(28)$^{P}_{S}$ | G$^{K}$ | G$^{K}$ | G$^{K}$ | G$^{K}$ | G$^{K}$ | 36$^{K}$ | 26$^{K}$ | 28$^{K}$ | 29$^{K}$ | 33$^{K}$ | 31$^{K}$ | $^{K}$(31)$^{J}_{S}$ | 30$^{F}_{K}$ | $^{K}$(29)$^{F}_{S}$ | (29)$^{J}_{S}$ |
| 22 | (28)$^{P}_{S}$ | F$^{S}$ | 30$^{S}$ | 33 | (31)$^{P}_{S}$ | (31)$^{P}_{S}$ | 32 | 34 | 34 | 31 | 32 | 30 | 31 | 30 | 34 | 30 | 30 | 31 | 33 | 31 | $^{K}$(34)$^{J}_{S}$ | 32$^{F}_{K}$ | 30$^{K}$ | E$^{K}$ |
| 23 | E$^{K}$ | E$^{K}$ | S$^{F}_{K}$ | 30$^{*K}$ | $^{K}$32$^{F}_{S}$ | S$^{K}$ | 32$^{K}$ | 35$^{K}$ | G$^{K}$ | G$^{K}$ | G$^{K}$ | G$^{K}$ | G$^{K}$ | G$^{K}$ | G$^{K}$ | G$^{K}$ | 30$^{K}$ | G$^{K}$ | 31$^{K}$ | 31$^{K}$ | 30$^{K}$ | $^{K}$30$^{F}_{S}$ | $^{K}$(28)$^{J}_{S}$ | $^{K}$(28)$^{J}_{F}$ |
| 24 | 30$^{K}$ | 28$^{F}_{K}$ | $^{K}$(30)$^{J}_{F}$ | F$^{K}$ | 29$^{F}_{K}$ | F$^{S}_{K}$ | 31$^{K}$ | 31$^{K}$ | $^{K}$31$^{H}_{F}$ | 28$^{K}$ | 30$^{K}$ | 28$^{K}$ | 29$^{K}$ | 27$^{K}$ | 28$^{K}$ | 30$^{K}$ | 29$^{K}$ | 30$^{K}$ | 29$^{K}$ | 31$^{K}$ | 31$^{K}$ | $^{K}$(32)$^{J}_{F}$ | $^{K}$(30)$^{J}_{S}$ | A$^{K}$ |
| 25 | F$^{S}_{K}$ | $^{K}$(29)$^{J}_{S}$ | $^{K}$(29)$^{J}_{S}$ | S$^{K}$ | S$^{K}$ | F$^{S}_{K}$ | (30)$^{S}_{A}$ | 35$^{H}_{K}$ | 35$^{K}$ | G$^{K}$ | G$^{K}$ | 28$^{K}$ | 27$^{H}_{K}$ | 29$^{K}$ | 27$^{K}$ | 31$^{K}$ | 31$^{K}$ | 31$^{K}$ | 33$^{K}$ | 30$^{K}$ | (31)$^{S}_{K}$ | 30$^{K}$ | $^{K}$(30)$^{S}_{F}$ | $^{K}$(30)$^{F}_{S}$ |
| 26 | $^{K}$(28)$^{J}_{S}$ | $^{K}$(28)$^{J}_{S}$ | $^{K}$(28)$^{J}_{S}$ | $^{K}$(29)$^{J}_{S}$ | $^{K}$(29)$^{J}_{S}$ | (31)$^{J}_{F}$ | 33 | 35 | 32 | 30 | 33 | 31 | 32 | 32 | 33 | 32 | 32 | 32 | 33 | 32 | 32 | 32 | 31$^{F}$ | 30 |
| 27 | 30$^{F}$ | 32$^{F}$ | 29 | 29$^{F}$ | $^{K}$(27)$^{J}_{S}$ | 29$^{F}_{K}$ | 33$^{K}$ | 33$^{K}$ | G$^{K}$ | G$^{K}$ | G$^{K}$ | G$^{K}$ | 28$^{K}$ | 27$^{K}$ | 30$^{K}$ | 30$^{K}$ | 30$^{K}$ | 32$^{K}$ | 33 | 33 | 31 | 29$^{F}$ | 29$^{F}$ | 30 |
| 28 | (31)$^{J}_{F}$ | (30)$^{F}_{S}$ | (29)$^{J}_{S}$ | (30)$^{J}_{S}$ | (29)$^{J}_{S}$ | (28)$^{J}_{S}$ | 32$^{K}$ | G$^{K}$ | G$^{K}$ | G$^{K}$ | G$^{K}$ | G$^{K}$ | G$^{K}$ | 28$^{K}$ | 30$^{K}$ | 29$^{K}$ | 30$^{K}$ | 31$^{K}$ | 31$^{K}$ | (31)$^{S}$ | (29)$^{S}$ | 30 | 30 | 30 |
| 29 | 30 | S | 31 | 30 | (29)$^{J}_{S}$ | (29)$^{J}_{S}$ | 32 | 32 | G | G | 30 | 31 | 30 | 32 | 32 | 31 | 32 | 33 | 32 | 30 | 30 | 30 | 30 | 29 |
| 30 | 30$^{J}_{F}$ | 28$^{F}$ | 30$^{F}$ | 31 | (30)$^{J}_{S}$ | 29 | 33 | 32 | 32 | 30 | 31 | 29 | 29 | 29 | 32 | C | 32 | 32 | 32 | 30 | 31 | 30 | 30 | 30 |
| 31 | 30 | 30 | 30 | 31 | 30 | 30 | 32 | 32 | C | 32 | 30 | 30 | 31 | 32 | 34 | 32 | 33 | 32 | 33 | 31 | 31 | 30 | 31 | (31)$^{J}_{S}$ |
| Median | 30 | 30 | 30 | 30 | 30 | 31 | 32 | 34 | 32 | 31 | 30 | 30 | 31 | 32 | 32 | 32 | 32 | 33 | 33 | 32 | 31 | 30 | 30 | 30 |
| Count | 29 | 27 | 29 | 29 | 28 | 27 | 29 | 31 | 30 | 31 | 31 | 31 | 31 | 31 | 31 | 29 | 31 | 31 | 31 | 31 | 31 | 31 | 30 | 29 |

Sweep 1.0 Mc to 25.0 Mc in 0.25 min

Manual ☐ Automatic ☒

U.S. GOVERNMENT PRINTING OFFICE 1946 O - 702518

# TABLE 80

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form accepted June 1948

## IONOSPHERIC DATA

(M 3000)F1 (Characteristic), ____ (Unit), March (Month), 1953

National Bureau of Standards (Institution)

Observed at Washington, D.C.

Scaled by: F.J.McC., E.J.W.

Lat 38.7°N, Long 77.1°W

75° W Mean Time

Calculated by: F.J.McC., E.J.W., N.B.

| Day | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | L | L | L | 3.8 | 3.9 | 3.7$^{H}$ | 3.8$^{H}$ | 3.8 | 3.6$^{H}$ | 3.8 | L | | | | | | |
| 2 | | | | | | | | Q$^{K}$ | 3.5$^{K}$ | 3.5$^{K}$ | 3.7$^{K}$ | (3.9)$^{H}_{K}$ | 3.7$^{K}$ | 3.7$^{K}$ | 3.6$^{K}$ | 3.5$^{K}$ | 3.4$^{K}$ | L$^{K}$ | | | | | | |
| 3 | | | | | | | | Q | L | 3.7 | 3.8 | 3.6 | 3.6 | 3.6 | L | 3.7 | L | Q | | | | | | |
| 4 | | | | | | | | Q | L | L | 3.8 | 3.8 | 3.7$^{H}$ | 3.7 | 4.3 | 3.8 | L | L | | | | | | |
| 5 | | | | | | | | L | L | L | L | 3.7 | 3.7$^{H}$ | 3.7 | 3.8 | L | L | 4.1 | | | | | | |
| 6 | | | | | | | | Q | L | (4.0)$^{J}$ | 3.8 | L | 3.7$^{H}$ | 3.7 | 3.9 | C | L | Q | | | | | | |
| 7 | | | | | | | | Q | L | 3.7 | 3.7 | 3.8 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | L | | | | | | |
| 8 | | | | | | | | L | L | 3.7 | 3.7 | 4.0$^{K}$ | 3.6$^{K}$ | 3.4$^{K}$ | 3.6$^{K}$ | 3.5$^{K}$ | L$^{K}$ | L$^{K}$ | | | | | | |
| 9 | | | | | | | | Q$^{K}$ | 3.2$^{K}$ | 3.8$^{K}$ | 3.9$^{K}$ | 3.7$^{K}$ | 3.6$^{K}$ | 3.7$^{K}$ | 3.5$^{K}$ | 3.5$^{K}$ | 3.4$^{K}$ | L$^{K}$ | | | | | | |
| 10 | | | | | | | | Q | L | 3.5 | 3.5$^{K}$ | 3.6$^{K}$ | 3.7$^{K}$ | 3.8$^{K}$ | 3.7$^{K}$ | 3.6$^{H}_{K}$ | 3.5$^{H}_{K}$ | L$^{K}$ | | | | | | |
| 11 | | | | | | | | Q$^{K}$ | 3.3$^{K}$ | 3.5$^{K}$ | 3.8$^{K}$ | 3.8$^{K}$ | 3.9$^{K}$ | 3.8$^{K}$ | 3.6$^{K}$ | 3.6$^{K}$ | (3.8)$^{D}_{K}$ | L$^{K}$ | | | | | | |
| 12 | | | | | | | | Q | 3.7 | 3.7$^{H}$ | 3.8 | 3.8$^{H}$ | 3.7$^{H}$ | 3.8$^{H}$ | 3.8 | 3.5$^{H}$ | L | L | | | | | | |
| 13 | | | | | | | | L | 3.9 | 3.9 | (4.0)$^{J}$ | 4.1$^{H}$ | 3.7$^{H}$ | (3.8)$^{H}$ | 3.6 | 3.8$^{H}$ | 3.7$^{H}$ | L | | | | | | |
| 14 | | | | | | | | L | 3.7 | 3.8 | 4.1 | 4.0 | 3.6 | 3.8 | 4.0 | 4.0 | 3.7 | L | | | | | | |
| 15 | | | | | | | | Q | L | 3.6$^{H}$ | 3.6$^{H}$ | 3.7$^{H}$ | 3.7 | 3.9 | 3.7 | 3.5 | L | L | | | | | | |
| 16 | | | | | | | | Q | L | 3.6 | 3.7 | 3.7 | 3.7 | 3.6 | 3.8 | L | L | L | | | | | | |
| 17 | | | | | | | | L | L | 3.7 | 3.7 | 3.7 | 3.8 | 3.8$^{H}$ | 3.6$^{H}$ | 3.7$^{H}$ | L | L | | | | | | |
| 18 | | | | | | | | L | L | 3.7 | 3.8 | 3.7 | 3.8 | 3.8 | 3.8 | 3.7 | L | L | | | | | | |
| 19 | | | | | | | | L | (3.6)$^{L}$ | 3.6 | 3.8$^{H}$ | 3.9 | 3.7 | 3.6 | 3.5$^{H}$ | 3.7 | L | L | | | | | | |
| 20 | | | | | | | | L | L | 3.7 | 4.0 | 3.8 | 3.7 | 3.6$^{H}$ | 3.6$^{H}_{K}$ | (3.7)$^{H}_{K}$ | (3.5)$^{D}_{K}$ | L$^{K}$ | | | | | | |
| 21 | | | | | | | | Q$^{K}$ | (3.7)$^{H}_{K}$ | 3.8$^{K}$ | 3.9$^{K}$ | 4.0$^{H}_{K}$ | 4.0$^{K}$ | 3.9$^{H}_{K}$ | 3.7$^{K}$ | 3.6$^{K}$ | 3.5$^{H}_{K}$ | 3.6$^{H}_{K}$ | Q$^{K}$ | | | | | |
| 22 | | | | | | | | L | L | 3.9 | 3.8$^{H}$ | 4.1 | 3.6 | 3.8$^{H}$ | 3.7$^{H}$ | 3.7 | 3.6$^{H}$ | 3.5$^{H}$ | L | | | | | |
| 23 | | | | | | | | 4.3$^{K}$ | 3.6$^{H}_{K}$ | 3.7$^{K}$ | 3.7$^{H}_{K}$ | 3.8$^{H}_{K}$ | 3.5$^{H}_{K}$ | 3.8$^{K}$ | 3.5$^{H}_{K}$ | 3.5$^{K}$ | 3.5$^{K}$ | 3.2$^{K}$ | Q$^{K}$ | | | | | |
| 24 | | | | | | | | Q$^{K}$ | 3.6$^{K}$ | (3.7)$^{H}_{K}$ | 3.8$^{K}$ | 3.7$^{H}_{K}$ | 3.7$^{K}$ | 3.7$^{K}$ | 3.8$^{K}$ | 3.5$^{H}_{K}$ | 3.5$^{H}_{K}$ | 3.3$^{K}$ | Q$^{K}$ | | | | | |
| 25 | | | | | | | | Q$^{K}$ | L$^{K}$ | (3.4)$^{J}_{K}$ | 3.8$^{K}$ | 3.8$^{H}_{K}$ | 3.7$^{K}$ | 3.6$^{K}$ | 3.5$^{K}$ | 3.5$^{K}$ | 3.5$^{K}$ | 3.7$^{K}$ | Q$^{K}$ | | | | | |
| 26 | | | | | | | | Q | 3.6 | 3.6 | 3.8$^{H}$ | 4.0 | 3.7 | 3.8 | 3.5 | 3.7 | 3.5 | L | Q | | | | | |
| 27 | | | | | | | | Q$^{K}$ | 3.8$^{K}$ | 3.6$^{K}$ | 3.9$^{K}$ | 4.0$^{K}$ | 3.9$^{K}$ | 3.8$^{K}$ | 3.6$^{K}$ | 3.6$^{K}$ | 3.5$^{K}$ | 3.6$^{K}$ | L | | | | | |
| 28 | | | | | | | | 3.6$^{K}$ | 3.6$^{K}$ | 3.8$^{K}$ | 3.9$^{K}$ | 3.9$^{K}$ | 3.9$^{K}$ | 3.8$^{K}$ | 3.6$^{K}$ | 3.6$^{K}$ | 3.6$^{K}$ | 3.7$^{K}$ | L$^{K}$ | | | | | |
| 29 | | | | | | | | Q | 3.5 | 3.8 | 3.8 | 3.9 | 3.9 | 4.0 | 3.8 | 3.5 | 3.5 | L | L | | | | | |
| 30 | | | | | | | | Q | 3.7 | 3.6$^{H}$ | 3.9 | 3.9$^{N}$ | 3.8 | 3.8 | 3.7 | C | 3.5 | L | Q | | | | | |
| 31 | | | | | | | | L | C | 3.7 | 3.7 | 3.7 | 3.7 | 3.7$^{H}$ | (3.9)$^{D}$ | 3.6$^{H}$ | (3.6)$^{L}$ | L | L | | | | | |
| Median | | | | | | | | — | 3.6 | 3.7 | 3.8 | 3.8 | 3.7 | 3.8 | 3.7 | 3.6 | 3.5 | 3.6 | — | | | | | |
| Count | | | | | | | | 2 | 15 | 28 | 30 | 30 | 31 | 31 | 30 | 27 | 20 | 8 | — | | | | | |

Sweep 1.0 Mc to 25.0 Mc in 0.25 min

Manual ☐ Automatic ☒

# TABLE 81

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

## IONOSPHERIC DATA

(M1500) E (Characteristic), _____ (Unit), March (Month), 1953

National Bureau of Standards (Institution)

Observed at Washington, D.C.

Scaled by: F.J.McC., E.J.W.

Lat 38.7° N, Long. 77.1° W — 75° W Mean Time

Calculated by: F.J.McC., E.J.W., N.B.

| Day | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | 5 | A | 4.2 H | (3.9) P | A | A | (4.2) P | 4.0 | 4.1 | 4.2 | 4.0 H | | | | | | | | |
| 2 | | | | | | | | 5 K | 4.4 H K | 4.2 K | 4.1 H K | 4.2 H K | (4.3) S K | 4.3 K | 4.2 K | 4.3 K | 4.1 K | 3.9 K | | | | | | | | |
| 3 | | | | | | | | 5 | A | (4.3) P | 4.2 | 4.2 | 4.4 | 4.3 | 4.3 | 4.2 | 4.0 | 4.0 | | | | | | | | |
| 4 | | | | | | | | 5 | 4.3 | 4.3 | 4.2 | 4.2 | 4.2 | (4.2) P | (4.3) P | 4.3 | 4.2 | 4.3 | | | | | | | | |
| 5 | | | | | | | | 5 | 4.1 | 4.3 | 4.3 | 4.2 | 4.2 | (4.3) P | 4.4 | 4.3 | 4.3 | 4.2 | | | | | | | | |
| 6 | | | | | | | | 5 | 4.0 | 4.0 | (4.0) P | 4.0 | 4.3 | 4.3 | 4.1 | C | 4.2 | A | | | | | | | | |
| 7 | | | | | | | | 4.3 H | 4.4 | 4.3 | 4.3 | 4.1 | 4.1 | 4.2 | 4.1 | 4.1 | 4.2 | 4.1 | | | | | | | | |
| 8 | | | | | | | | 3.9 | 4.2 H | 4.1 | 4.1 | 4.1 K | 4.1 K | 4.1 K | 4.0 K | 4.0 K | 4.1 K | 4.1 K | | | | | | | | |
| 9 | | | | | | | | 4.1 K | 4.2 H K | 4.3 K | (4.1) A K | 4.3 K | 4.0 K | 4.2 K | 4.2 K | 4.3 K | 4.3 K | 4.2 K | (4.0) S K | | | | | | | |
| 10 | | | | | | | | 4.4 | 4.3 H | 4.1 | A K | 4.2 K | A K | 4.1 K | 4.2 K | (4.2) A K | 4.3 K | A K | | | | | | | | |
| 11 | | | | | | | | 4.0 K | (4.2) P K | 4.3 K | 4.3 K | 4.2 K | 4.4 K | 4.4 H K | 4.2 H K | 4.3 H K | 4.3 K | 4.3 H K | A | | | | | | | |
| 12 | | | | | | | | (4.2) S | 4.2 H | 4.2 H | 4.5 H | 4.3 H | (4.4) P | 4.4 H | 4.1 | 4.1 | 4.1 | 4.3 | (4.3) S | | | | | | | |
| 13 | | | | | | | | (3.9) S | 4.1 | 4.3 | 4.0 | 4.1 H | 4.1 | 4.2 H | 4.2 | 4.1 H | 4.1 | 4.1 H | S | | | | | | | |
| 14 | | | | | | | | S | 4.4 | 4.4 | (4.3) P | (4.2) P | (4.2) P | 4.1 H | 4.2 | 4.3 | 4.3 | 4.4 H | S | | | | | | | |
| 15 | | | | | | | | S | 4.5 | 4.2 | (4.3) P | (4.3) P | (4.4) B | 4.1 | 4.0 | 4.0 | 4.2 | 4.3 | S | | | | | | | |
| 16 | | | | | | | | 3.6 | 4.2 | 4.2 | 4.3 | 4.0 | 4.2 | 4.2 | 4.2 | 4.2 | 4.3 | 4.3 | S | | | | | | | |
| 17 | | | | | | | | S | 4.3 | 4.3 | 4.2 | 4.2 | 4.3 | 4.1 | 4.0 | 4.1 | 4.2 | 4.2 | S | | | | | | | |
| 18 | | | | | | | | 4.2 | 4.3 | 4.3 | 4.2 | 4.2 | 4.1 | 4.1 | 4.2 | 4.1 | 4.3 | 4.3 | S | | | | | | | |
| 19 | | | | | | | | 4.0 | 4.1 | 4.2 | 4.0 | 4.3 | 4.0 | 4.0 | 4.1 | 4.2 | 4.3 | 4.1 | 3.8 | | | | | | | |
| 20 | | | | | | | | 4.3 | 4.2 | 4.3 | B | (4.2) P | A | 4.2 | 4.1 K | 4.2 K | (4.3) P K | 4.4 K | S K | | | | | | | |
| 21 | | | | | | | | 4.1 K | A K | 4.3 H K | 4.4 K | 4.2 K | 4.2 K | (4.3) P K | (4.1) B K | (4.3) B K | (4.2) P K | 4.2 K | 4.2 K | | | | | | | |
| 22 | | | | | | | | (4.1) P | A | 4.4 | (4.5) A | A | A | 4.1 | A | 4.2 | (4.1) S | 4.1 | S | | | | | | | |
| 23 | | | | | | | | 4.2 K | 4.2 K | 4.2 K | A K | (4.2) P K | (4.1) S K | 4.1 K | 4.2 K | (4.3) P K | 3.9 K | (4.2) P K | A K | | | | | | | |
| 24 | | | | | | | | 4.2 K | 4.2 K | 4.1 K | 4.2 K | B K | (4.0) P K | 4.2 K | 4.1 K | 4.2 K | 4.3 H K | 4.0 H K | (3.9) P K | | | | | | | |
| 25 | | | | | | | | 4.1 H K | 4.2 K | (4.3) S K | 4.4 K | (4.2) P K | 4.0 K | 4.2 K | (4.2) P K | 4.3 K | 4.2 H K | 3.9 K | S K | | | | | | | |
| 26 | | | | | | | | 4.3 | A | (4.1) P | (4.2) P | 4.2 | 4.3 | (4.0) P | 4.2 | 4.2 | 4.3 | 4.2 | S | | | | | | | |
| 27 | | | | | | | | 4.3 K | 4.3 K | 4.3 K | 4.2 K | 4.1 K | 4.3 K | 4.2 K | 4.3 K | 4.3 K | 4.2 K | 4.2 K | S | | | | | | | |
| 28 | | | | | | | | (4.3) P K | 4.0 K | 4.2 K | (4.3) P K | 4.2 K | 4.2 K | 4.2 K | 4.3 K | 4.3 K | 4.3 K | 4.2 K | 3.9 K | | | | | | | |
| 29 | | | | | | | | 4.1 | 4.2 | 4.2 | 4.3 | (4.3) P | 4.3 | (4.3) P | 4.3 | 4.2 | 4.2 | 4.1 | S | | | | | | | |
| 30 | | | | | | | | 4.0 H | 4.2 | 4.3 | (4.3) P | (4.1) P | 4.3 | 4.2 | 4.2 | C | 4.1 | 4.2 | S | | | | | | | |
| 31 | | | | | | | | 4.0 H | C | (4.3) P | (4.3) B | 4.2 | 4.3 | 4.3 | A | (4.3) P | (4.2) P | (4.3) B | S | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Median | | | | | | | | 4.1 | 4.2 | 4.3 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.0 | | | | | | | |
| Count | | | | | | | | 22 | 25 | 31 | 28 | 28 | 27 | 31 | 29 | 29 | 31 | 29 | 6 | | | | | | | |

Sweep 1.0 Mc to 25.0 Mc in 0.25 min

Manual ☐ Automatic ☒

Table 82

Ionospheric Storminess at Washington, D. C.

March 1953

| Day | Ionospheric character* 00-12 GCT | 12-24 GCT | Principal storms Beginning GCT | End GCT | Geomagnetic character** 00-12 GCT | 12-24 GCT |
|---|---|---|---|---|---|---|
| 1 | 1 | 1 | | | 3 | 2 |
| 2 | 4 | 7 | 0400 | ---- | 5 | 4 |
| 3 | 3 | 3 | ---- | 0500 | 4 | 2 |
| 4 | 1 | 3 | | | 2 | 2 |
| 5 | 1 | 3 | | | 2 | 2 |
| 6 | 1 | 3 | | | 1 | 3 |
| 7 | 0 | 3 | | | 4 | 2 |
| 8 | 1 | 4 | 1600 | ---- | 2 | 3 |
| 9 | 5 | 5 | ---- | ---- | 4 | 3 |
| 10 | 3 | 4 | ---- | 0400 | 3 | 3 |
| | | | 1500 | 2300 | | |
| 11 | 2 | 4 | 1100 | 2300 | 2 | 1 |
| 12 | 1 | 2 | | | 2 | 1 |
| 13 | 1 | 3 | | | 0 | 1 |
| 14 | 1 | 2 | | | 3 | 3 |
| 15 | 0 | 3 | | | 3 | 2 |
| 16 | 1 | 2 | | | 3 | 2 |
| 17 | 1 | 1 | | | 2 | 1 |
| 18 | 1 | 2 | | | 1 | 2 |
| 19 | 1 | 1 | | | 3 | 3 |
| 20 | 1 | 4 | 1900 | ---- | 2 | 2 |
| 21 | 4 | 6 | ---- | ---- | 4 | 4 |
| 22 | 3 | 2 | ---- | 0300 | 4 | 3 |
| 23 | 5 | 6 | 0100 | ---- | 5 | 4 |
| 24 | 4 | 4 | ---- | ---- | 5 | 4 |
| 25 | 5 | 4 | ---- | ---- | 4 | 4 |
| 26 | 5 | 1 | ---- | 1000 | 3 | 4 |
| 27 | 2 | 4 | 0900 | 2300 | 4 | 2 |
| 28 | 3 | 4 | 1100 | 2400 | 4 | 3 |
| 29 | 2 | 1 | | | 3 | 3 |
| 30 | 2 | 2 | | | 3 | 3 |
| 31 | 2 | 2 | | | 2 | 2 |

*Ionosphere character figure (I-figure) for ionospheric storminess at Washington, D. C., during 12-hour period, on an arbitrary scale of 0 to 9, 9 representing the greatest disturbance.

**Average for 12 hours of Cheltenham, Maryland, geomagnetic K-figures on an arbitrary scale of 0 to 9, 9 representing the greatest disturbance.

----Dashes indicate continuing storm.

Table 83a

## Radio Propagation Quality Figures
(Including Comparisons with Short-Term and Advance Forecasts)

February 1953

| Day | North Atlantic 6-hourly quality figures | | | | Short-term forecasts issued about one hour in advance of: | | | | Whole day quality index | Advance forecasts (J-reports) for whole day; issued in advance by: | | | Geomagnetic $K_{Ch}$ | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 00 to 06 | 06 to 12 | 12 to 18 | 18 to 24 | 00 | 06 | 12 | 18 | | 1-4 days | 4-7 days | 8-25 days | Half day (1) | Half day (2) |
| 1 | (4) | (4) | 6 | 6 | 6 | 5 | 6 | 6 | 5 | (4) | 5 | | 1 | 2 |
| 2 | (4) | 5 | 6 | 6 | 5 | (4) | 6 | 6 | 5 | (4) | 5 | | 2 | 1 |
| 3 | 5 | 5 | 6 | 6 | 5 | 5 | 6 | 6 | 6 | 5 | 5 | | 2 | 1 |
| 4 | 6 | 5 | 7 | 7 | 6 | 5 | 6 | 6 | 6 | 5 | 5 | | 2 | 2 |
| 5 | 6 | 6 | 7 | 7 | 6 | 6 | 7 | 7 | 7 | 5 | 6 | | 0 | 2 |
| 6 | 6 | 6 | 7 | 7 | 7 | 6 | 7 | 7 | 7 | 6 | 6 | | 1 | 1 |
| 7 | 7 | 6 | 7 | 7 | 6 | 6 | 7 | 7 | 7 | 6 | 6 | | 1 | 0 |
| 8 | 6 | 6 | 7 | 7 | 7 | 6 | 6 | 6 | 7 | 6 | 6 | | 2 | 2 |
| 9 | 6 | 7 | 7 | 6 | 6 | 5 | 6 | 6 | 7 | 6 | 6 | | 2 | 2 |
| 10 | 7 | 6 | 7 | 6 | 5 | 5 | 7 | 6 | 7 | 6 | 6 | | 1 | 3 |
| 11 | 5 | 5 | 7 | 6 | 5 | 5 | 7 | 6 | 6 | 6 | 7 | | 2 | 2 |
| 12 | 5 | 6 | 7 | 7 | 5 | 5 | 6 | 6 | 6 | 7 | 7 | | 1 | 1 |
| 13 | 6 | 6 | 7 | 7 | 6 | 5 | 7 | 6 | 7 | 7 | 7 | | 0 | 1 |
| 14 | 6 | 6 | 7 | 7 | 6 | 5 | 5 | 6 | 7 | 6 | 6 | | 3 | 2 |
| 15 | 5 | 5 | 7 | 7 | 6 | 5 | 6 | 6 | 6 | 5 | 5 | | 3 | 3 |
| 16 | 6 | (4) | 7 | 6 | 6 | (4) | 5 | 5 | 6 | 5 | 5 | | 3 | 3 |
| 17 | 5 | (4) | 7 | 7 | 5 | (3) | 5 | 5 | 6 | 6 | 6 | | 3 | 2 |
| 18 | 5 | (4) | 7 | 7 | 5 | (4) | 6 | 6 | 6 | 5 | 7 | | 2 | 2 |
| 19 | 5 | 5 | 7 | 7 | 5 | 5 | 6 | 6 | 6 | 5 | 7 | | 2 | 2 |
| 20 | 5 | (4) | 7 | 7 | 5 | 5 | 5 | 5 | 6 | 5 | 5 | | 1 | 2 |
| 21 | 6 | 5 | 7 | 7 | 5 | (4) | 5 | 5 | 6 | (4) | (4) | X | 3 | 1 |
| 22 | 5 | 5 | 7 | 6 | 5 | 5 | 6 | 5 | 6 | (4) | (4) | X | 2 | (4) |
| 23 | (3) | (3) | 6 | (4) | (3) | (3) | (4) | (4) | (4) | (3) | (3) | X | (5) | (4) |
| 24 | (3) | (3) | 6 | (4) | (3) | (2) | (3) | (4) | (4) | (3) | (3) | X | (5) | (5) |
| 25 | (3) | (2) | 5 | 5 | (3) | (2) | (3) | (4) | (3) | (3) | (4) | X | (5) | (4) |
| 26 | (3) | (2) | 5 | (4) | (4) | (3) | (4) | (4) | (3) | (4) | 5 | | (4) | (4) |
| 27 | (3) | (3) | 5 | 5 | (2) | (2) | (4) | (4) | (4) | (4) | 5 | | (4) | 3 |
| 28 | (3) | (3) | 6 | 5 | (2) | (2) | 5 | (4) | (3) | (3) | 5 | | 3 | 3 |

**Score:**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Quiet periods | P | 14 | 10 | 9 | 9 | | 3 | 4 | |
| | S | 5 | 6 | 11 | 13 | | 16 | 16 | |
| | U | 1 | 1 | 6 | 3 | | 1 | 0 | |
| | F | 0 | 0 | 2 | 0 | | 2 | 2 | |
| Disturbed periods | P | 3 | 4 | 0 | 3 | | 3 | 0 | |
| | S | 4 | 7 | 0 | 0 | | 3 | 4 | |
| | U | 0 | 0 | 0 | 0 | | 0 | 2 | |
| | F | 1 | 0 | 0 | 0 | | 0 | 0 | |

Scales:

Q-scale of Radio Propagation Quality
- (1) - useless
- (2) - very poor
- (3) - poor
- (4) - poor to fair
- 5 - fair
- 6 - fair to good
- 7 - good
- 8 - very good
- 9 - excellent

K-scale of Geomagnetic Activity
0 to 9, 9 representing the greatest disturbance; $K_{Ch} \geq 4$ indicates significant disturbance, enclosed in ( ) for emphasis

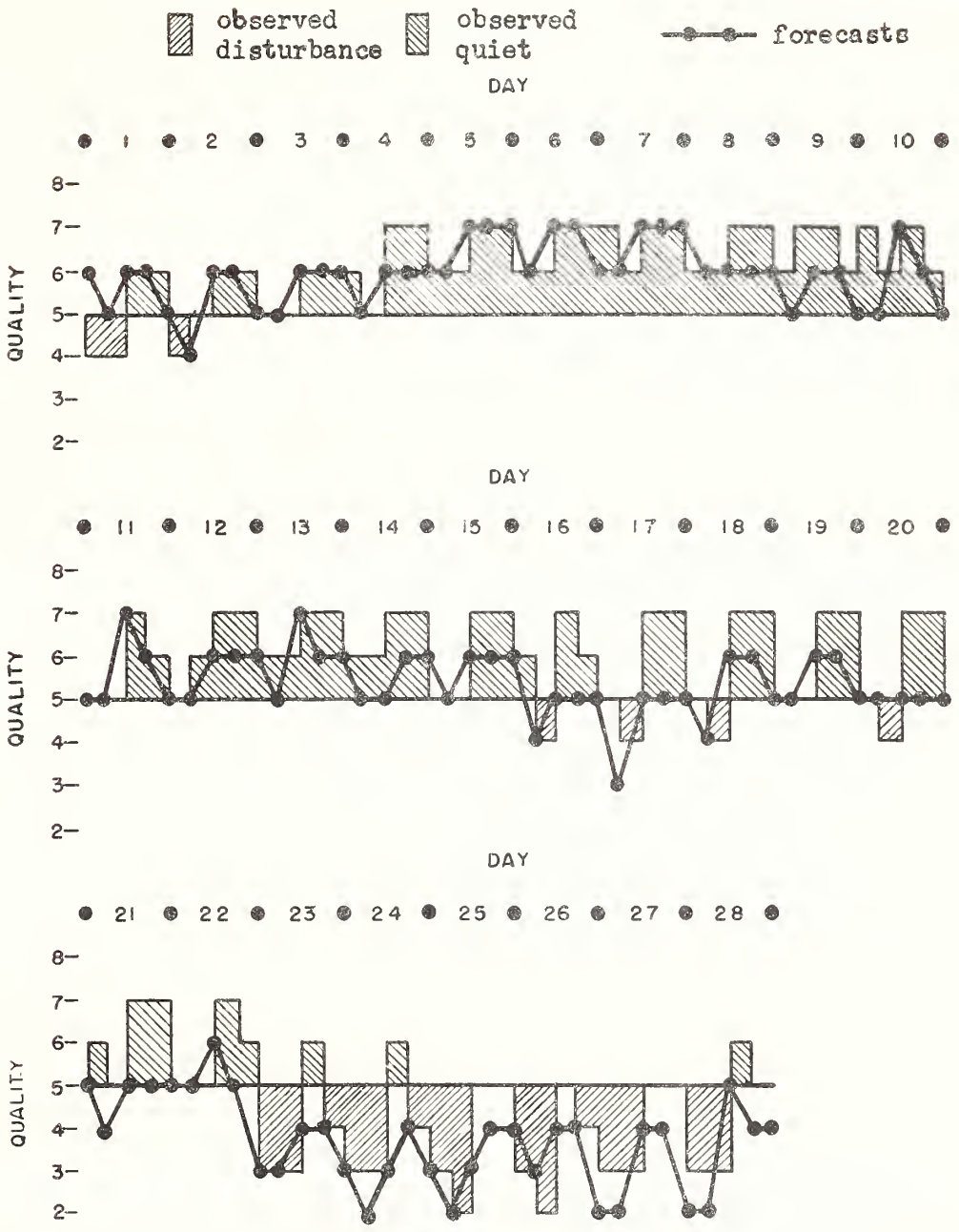
Scoring: (beginning October 1952)
- P - Perfect: forecast quality equal to observed
- S - Satisfactory: (beginning October 1952) forecast quality one grade different from observed
- U - Unsatisfactory: forecast quality two or more grades different from observed when both forecast and observed were $\geq 5$, or both $\leq 5$
- F - Failure: other times when forecast quality two or more grades different from observed

Symbols:
- X - probable disturbed date

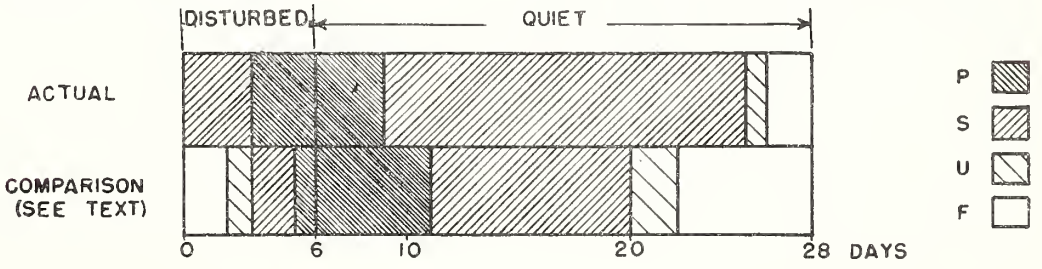
**Note:** All times are UT (Universal Time or GCT).

Table 83b

Short-Term Forecasts--February 1953




Outcome of Advance Forecasts (1 to 3 or 4 days ahead)--February 1953



## Table 84a

Coronal observations at Climax, Colorado (5303A), east limb

| Date GCT | Degrees north of the solar equator | | | | | | | | | | | | | | | | | | | 0° | Degrees south of the solar equator | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 90 | 85 | 80 | 75 | 70 | 65 | 60 | 55 | 50 | 45 | 40 | 35 | 30 | 25 | 20 | 15 | 10 | 5 | | | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 |
| 1953 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mar 1.6 | - | - | - | - | 1 | 4 | 6 | 6 | 6 | 8 | 9 | 13 | 16 | 17 | 10 | 16 | 17 | 20 | 18 | | 14 | 20 | 16 | 7 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | - | - | - | - | - |
| 4.9a | - | - | - | - | - | - | - | 3 | 3 | - | - | - | - | - | 2 | 3 | 3 | 4 | 4 | | 4 | 5 | 6 | 3 | 3 | 2 | 1 | - | - | - | - | - | - | - | - | - | - | - |
| 5.8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | 1 | 2 | 3 | 2 | | 3 | 5 | 4 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 3 | 3 | - | - | - | - | - | - |
| 6.8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | 1 | 2 | 3 | | 3 | 4 | 3 | 3 | 2 | 2 | 2 | 3 | 2 | 2 | 2 | 1 | - | - | - | - | - | - |
| 7.7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | 1 | 2 | 3 | 4 | | 4 | 4 | 3 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 2 | 1 | - | - | - | - | - | - |
| 8.9a | - | - | - | - | - | - | - | - | - | - | - | - | - | 3 | 3 | 3 | 1 | 1 | 3 | | 3 | 2 | 2 | 2 | 2 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 9.8a | - | - | - | - | - | - | - | 3 | 3 | 2 | 1 | 1 | 1 | 3 | 3 | 3 | 3 | 1 | - | | - | - | - | - | - | - | - | 2 | 3 | 2 | - | - | - | - | - | - | - | - |
| 10.8 | - | - | - | - | - | - | - | 3 | 3 | 3 | 2 | 2 | 2 | 3 | 3 | 4 | - | - | - | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 12.7 | - | - | - | - | - | 3 | 4 | 4 | 2 | 2 | 1 | - | - | - | - | - | - | - | - | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 15.9a | - | - | - | - | - | - | 2 | 3 | 2 | - | - | - | - | - | - | - | - | - | - | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 16.8 | - | - | - | - | - | - | - | 1 | 1 | 3 | 2 | 1 | 3 | 3 | 3 | 3 | 3 | 2 | 1 | | 1 | 1 | 2 | 5 | 2 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 17.7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2 | 2 | 2 | | - | - | 8 | 9 | 2 | 2 | - | - | - | - | - | - | - | - | - | - | - | - |
| 19.7a | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2 | 3 | 3 | | 3 | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 24.7 | - | - | - | - | - | 1 | 1 | 2 | 3 | 2 | 3 | 4 | 6 | 7 | 8 | 6 | 3 | 4 | 3 | | 2 | 1 | 1 | 1 | 1 | 2 | 3 | 3 | 3 | 3 | 2 | - | - | - | - | - | - | - |
| 25.7 | - | - | - | - | - | 1 | 2 | 2 | 2 | 3 | 3 | 4 | 5 | 5 | 4 | 3 | 3 | 3 | 1 | | 1 | 1 | 2 | 2 | 2 | 2 | 2 | - | - | - | - | - | - | - | - | - | - | - |
| 27.7 | - | - | - | - | - | 3 | 4 | 4 | 3 | 4 | 6 | 6 | 6 | 8 | 9 | 12 | 10 | 11 | 9 | | 15 | 10 | 12 | 4 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | - | - | - | - | - | - |
| 28.9 | - | - | - | - | - | - | 4 | 4 | 3 | 2 | 2 | 3 | 4 | 7 | 6 | 5 | 8 | 7 | 17 | | 16 | 13 | 12 | 5 | 3 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 2 | - | - | - | - | - |

## Table 85a

Coronal observations at Climax, Colorado (6374A), east limb

| Date GCT | Degrees north of the solar equator | | | | | | | | | | | | | | | | | | | 0° | Degrees south of the solar equator | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 90 | 85 | 80 | 75 | 70 | 65 | 60 | 55 | 50 | 45 | 40 | 35 | 30 | 25 | 20 | 15 | 10 | 5 | | | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 |
| 1953 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mar 1.6 | 4 | 5 | 4 | 4 | 3 | 1 | 1 | 1 | 1 | 2 | 2 | 3 | 3 | 3 | 1 | 1 | 3 | 1 | 3 | | 4 | 1 | 2 | 4 | 4 | 4 | 3 | 3 | 3 | 3 | 2 | 1 | 2 | 2 | 3 | 3 | 4 | 2 |
| 4.9a | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 3 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | 1 | 2 | 2 | 3 | 3 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 5.8 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 2 | 4 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 3 | | 4 | 4 | 3 | 4 | 4 | 4 | 3 | 4 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 |
| 6.8 | 4 | 4 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 2 | 5 | 5 | 4 | 3 | 3 | 4 | 5 | | 5 | 6 | 4 | 4 | 4 | 3 | 3 | 4 | 2 | 2 | 1 | 1 | 1 | 1 | 2 | 3 | 3 | 3 |
| 7.7 | 5 | 4 | 4 | 4 | 3 | 3 | 3 | 3 | 4 | 5 | 5 | 4 | 4 | 4 | 5 | 5 | 6 | 5 | 6 | | 5 | 3 | 4 | 4 | 4 | 4 | 4 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 |
| 8.9a | 3 | 4 | 4 | 3 | 3 | 3 | 2 | 2 | 2 | 1 | 1 | 1 | 2 | 3 | 2 | 1 | 1 | 3 | 4 | | 3 | 3 | 4 | 4 | 3 | 4 | 5 | 4 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 |
| 9.8a | 4 | 4 | 4 | 3 | 3 | 2 | 2 | 2 | 2 | 3 | 4 | 3 | 3 | 4 | 3 | 3 | 3 | 5 | 4 | | 5 | 5 | 4 | 5 | 5 | 6 | 6 | 6 | 4 | 3 | 2 | 1 | 1 | 1 | 3 | 3 | 3 | 4 |
| 10.8 | 4 | 3 | 3 | 3 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 3 | 3 | 4 | 5 | 5 | | 4 | 4 | 4 | 4 | 4 | 5 | 5 | 5 | 4 | 3 | 2 | 2 | 2 | 3 | 3 | 3 | 4 | 4 |
| 12.7 | 3 | 3 | 3 | 2 | 1 | 1 | - | - | - | - | - | - | - | 1 | 1 | 1 | 2 | 3 | 3 | | 3 | 2 | 2 | 2 | 3 | 3 | 3 | 2 | 1 | 1 | 1 | 1 | 2 | 3 | 3 | 3 | 3 | 3 |
| 15.9a | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 4 | 5 | | 5 | 5 | 5 | 4 | 3 | 2 | 3 | 3 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 |
| 16.8 | 3 | 3 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 3 | 3 | 3 | 5 | | 5 | 4 | 5 | 7 | 5 | 3 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | |
| 17.7 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 3 | | 3 | 5 | 10 | 12 | 9 | 5 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 3[a] | 3[a] |
| 19.7a | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 3 | 3 | 2 | 2 | 2 | 3 | 2 | 2 | 2 | | 3 | 6 | 9 | 7 | 9 | 4 | 3 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 |
| 24.7 | 3 | 3 | 3 | 2 | 2 | 1 | - | - | - | - | - | - | - | - | 3 | 3 | 5 | 5 | 4 | | 6 | 7 | 6 | 6 | 6 | 7 | 7 | 4 | 3 | 3 | 3 | 4 | 4 | 4 | 5 | 5 | 4 | 3 |
| 25.7 | 2 | 3 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | - | - | - | - | - | - | - | 3 | 4 | 1 | | 2 | 3 | 3 | 3 | 2 | 3 | 3 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 |
| 27.7 | 2 | 3 | 2 | 2 | 1 | - | - | - | - | - | - | - | - | 3 | - | - | 5 | 3 | 2 | | 4 | 9 | 4 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 |
| 28.9 | 4 | 4 | 3 | 2 | 1 | - | - | - | - | - | - | - | - | - | 2 | 2 | 1 | 1 | 11 | | 7 | 2 | 2 | 3 | 2 | 1 | 1 | - | - | - | - | - | - | - | 1 | 2 | 3 | 3 |

## Table 86a

Coronal observations at Climax, Colorado (6702A), east limb

| Date GCT | Degrees north of the solar equator | | | | | | | | | | | | | | | | | | | 0° | Degrees south of the solar equator | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 90 | 85 | 80 | 75 | 70 | 65 | 60 | 55 | 50 | 45 | 40 | 35 | 30 | 25 | 20 | 15 | 10 | 5 | | | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 |
| 1953 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mar 1.6 | - | - | - | - | - | - | - | - | - | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | 3 | 1 | 1 | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 4.9a | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 5.8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 6.8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 7.7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 8.9a | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 9.8a | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 10.8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 12.7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 15.9a | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 16.8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 17.7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 19.7a | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 24.7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 25.7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 27.7 | - | - | - | - | - | - | - | - | - | - | - | - | - | 2 | 2 | 2 | 2 | 2 | 2 | | 2 | 3 | 2 | 2 | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 28.9 | - | - | - | - | - | - | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | | 3 | 2 | 2 | 2 | 2 | - | - | - | - | - | - | - | - | - | - | - | - | - |

Table 84b

Coronal observations at Climax, Colorado (5303A), west limb

| Date GCT | Degrees south of the solar equator | | | | | | | | | | | | | | | | | | | 0° | Degrees north of the solar equator | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 90 | 85 | 80 | 75 | 70 | 65 | 60 | 55 | 50 | 45 | 40 | 35 | 30 | 25 | 20 | 15 | 10 | 5 | | | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 |
| 1953 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mar 1.6 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | 2 | 3 | 4 | 2 | 2 | 2 | 3 | 3 | 3 | 2 | - | - | - | - | - | - | - |
| 4.9 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | 3 | 5 | 5 | 3 | 1 | 1 | - | - | - | - | - | - | - | - | - | - | - | - |
| 5.8a | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2 | 4 | 3 | 3 | 2 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 6.8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | 2 | | 5 | 5 | 4 | 3 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | - | - | - | - | - | - | - | - |
| 7.7 | - | - | - | - | - | - | - | - | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | | 4 | 6 | 6 | 6 | 5 | 5 | 4 | 3 | 3 | 3 | 1 | - | - | - | - | - | - | - | - |
| 8.9 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2 | 2 | 3 | 3 | | 3 | 4 | 2 | 3 | 4 | 4 | 4 | 3 | 3 | 1 | - | - | - | - | - | - | - | - | - |
| 9.8 | - | - | - | - | - | - | - | - | 2 | 3 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | | 3 | 3 | 3 | 5 | 6 | 6 | 6 | 6 | 5 | 3 | 2 | 1 | - | - | - | - | - | - | - |
| 10.8 | - | - | - | - | - | - | 1 | 2 | 2 | 3 | 3 | 2 | 2 | 1 | 2 | 3 | 3 | 2 | | 3 | 5 | 7 | 8 | 7 | 8 | 9 | 7 | 4 | 3 | 3 | 3 | 2 | 1 | - | - | - | - | - |
| 12.7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | - | 3 | 7 | 8 | 11 | 17 | 16 | 12 | 4 | 2 | 1 | 1 | 6 | 4 | - | - | - | - | - |
| 15.9 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | 1 | 3 | 5 | | 6 | 7 | 7 | 4 | 4 | 3 | 3 | 1 | 1 | 1 | - | - | - | - | - | - | - | - | - |
| 16.8a | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2 | 6 | 7 | | 8 | 7 | 5 | 6 | 3 | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 17.7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2 | 3 | 5 | 5 | | 6 | 4 | 4 | 3 | 2 | 2 | 2 | - | - | - | - | - | - | - | - | - | - | - | - |
| 19.7a | - | - | - | - | - | - | - | - | X | X | X | X | X | X | X | X | X | X | | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | - |
| 24.7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 4 | 3 | 2 | 2 | 1 | - | - | - |
| 25.7a | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | - | - | - | - | - | - | - | 3 | 3 | 2 | 3 | 3 | 3 | - | - | - | - | - | - |
| 27.7a | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | - | - | - | - | - | 1 | 1 | 2 | 1 | 1 | 2 | 3 | 3 | 2 | - | - | - | - | - |
| 28.9 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | - | - | - | - | - | - | - | 2 | 2 | 3 | 4 | 3 | - | - | - | - | - | - |

Table 85b

Coronal observations at Climax, Colorado (6374A), west limb

| Date GCT | Degrees south of the solar equator | | | | | | | | | | | | | | | | | | | 0° | Degrees north of the solar equator | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 90 | 85 | 80 | 75 | 70 | 65 | 60 | 55 | 50 | 45 | 40 | 35 | 30 | 25 | 20 | 15 | 10 | 5 | | | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 |
| 1953 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mar 1.6 | 2 | 3 | 4 | 5 | 4 | 3 | 2 | 3 | 3 | 4 | 6 | 5 | 5 | 4 | 7 | 7 | 7 | 9 | | 9 | 6 | 5 | 4 | 4 | 4 | 4 | 4 | 5 | 5 | 2 | 1 | 1 | 1 | 2 | 3 | 3 | 4 | 4 |
| 4.9 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 2 | 3 | 3 | 4 | 4 | 3 | 3 | 5 | | 6 | 6 | 3 | 3 | 3 | 4 | 6 | 4 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 |
| 5.8a | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 2 | 2 | 3 | 4 | 4 | 3 | 4 | | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 6.8 | 3 | 4 | 3 | 3 | 2 | 2 | 1 | 1 | 1 | 1 | 3 | 5 | 5 | 5 | 5 | 5 | 5 | 3 | | 2 | 2 | 2 | 1 | 4 | 4 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 3 | 3 | 3 | 4 | 4 | 4 |
| 7.7 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 3 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | | 6 | 6 | 5 | 5 | 12 | 6 | 6 | 6 | 5 | 5 | 3 | 3 | 3 | 3 | 4 | 4 | 5 | 5 | 5 |
| 8.9 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | | 4 | 4 | 5 | 4 | 5 | 4 | 4 | 4 | 4 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 |
| 9.8 | 4 | 4 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 5 | 4 | | 6 | 6 | 5 | 6 | 4 | 4 | 5 | 4 | 4 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 4 | 4 |
| 10.8 | 4 | 4 | 4 | 4 | 4 | 4 | 3 | 3 | 2 | 3 | 4 | 5 | 5 | 6 | 6 | 6 | 7 | 6 | | 6 | 6 | 6 | 4 | 3 | 4 | 4 | 4 | 4 | 4 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 |
| 12.7 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 3 | 5 | 5 | 4 | 4 | 4 | 4 | 5 | 3 | | 3 | 4 | 4 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 3 | 3 | 3 | 3 | 3 |
| 15.9 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 16.8a | 2 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 2 | 3 | 3 | 3 | 3 | 2 | | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 5 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 3 |
| 17.7 | 3a | 3a | 3a | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 4 | 2 | 2 | 2 | 3 | | 3 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 |
| 19.7a | 2 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | X | X | X | X | X | X | X | X | X | X | | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | 1 |
| 24.7 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 4 | 5 | 5 | 5 | 4 | 5 | 5 | | 5 | 5 | 4 | 3 | 3 | 1 | 1 | 3 | 4 | 3 | 2 | 1 | 2 | 2 | 3 | 3 | 3 | 3 | 3 |
| 25.7a | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 2 | 3 | 4 | 3 | 3 | 3 | 3 | | 5 | 5 | 4 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 27.7a | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 2 | 2 | 3 | 3 | 2 | 2 | 2 | 2 | 4 | 4 | | 4 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 |
| 28.9 | 3 | 3 | 1 | 1 | 2 | 2 | 1 | 1 | 1 | 1 | 2 | 3 | 2 | 2 | 3 | 3 | 3 | 3 | | 4 | 5 | 3 | 3 | 3 | 2 | 2 | 2 | 3 | 2 | 1 | 1 | 1 | 1 | 2 | 3 | 3 | 4 | 4 |

Table 86b

Coronal observations at Climax, Colorado (6702A), west limb

| Date GCT | Degrees south of the solar equator | | | | | | | | | | | | | | | | | | | 0° | Degrees north of the solar equator | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 90 | 85 | 80 | 75 | 70 | 65 | 60 | 55 | 50 | 45 | 40 | 35 | 30 | 25 | 20 | 15 | 10 | 5 | | | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 |
| 1953 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mar 1.6 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 4.9 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 5.8a | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 6.8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 7.7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 8.9 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 9.8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 10.8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 12.7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 15.9 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 16.8a | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 17.7 | -a | -a | -a | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 19.7a | - | - | - | - | - | - | - | - | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | - |
| 24.7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 25.7a | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 27.7a | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 28.9 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

Table 87a

Coronal observations at Sacramento Peak, New Mexico (5303A), east limb

| Date GCT | Degrees north of the solar equator | | | | | | | | | | | | | | | | | | | 0° | Degrees south of the solar equator | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 90 | 85 | 80 | 75 | 70 | 65 | 60 | 55 | 50 | 45 | 40 | 35 | 30 | 25 | 20 | 15 | 10 | 5 | | | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 |
| 1953 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mar 4.7 | - | - | - | 2 | 2 | 2 | 3 | 4 | 4 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 5 | 7 | 8 | | 10 | 11 | 14 | 13 | 8 | 5 | 4 | 2 | 2 | 2 | 3 | 4 | 5 | 3 | - | - | - | - |
| 5.7 | 2 | - | - | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 5 | 6 | 7 | | 5 | 8 | 12 | 9 | 4 | 3 | 2 | 2 | 3 | 4 | 4 | 4 | 3 | 2 | - | - | - | - |
| 11.8 | - | - | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 2 | 3 | 2 | 3 | 3 | 4 | 4 | 5 | 4 | | 4 | 3 | 3 | 3 | 3 | - | - | - | - | - | 2 | 2 | 2 | 2 | 2 | 2 | 2 | - |
| 12.7 | - | - | - | - | - | 2 | 3 | 4 | 7 | 6 | 5 | 4 | 4 | 4 | 4 | 3 | 2 | 2 | 2 | | 2 | - | - | 2 | 2 | 3 | 2 | 2 | 2 | 3 | 3 | - | - | - | - | - | - | - |
| 13.7 | - | - | - | - | - | - | 2 | 3 | 5 | 6 | 5 | 4 | 4 | 3 | 3 | 3 | 3 | 4 | 2 | | 2 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 14.7a | - | - | - | - | - | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 3 | 3 | 2 | | 3 | 2 | 2 | 2 | 2 | 2 | 2 | - | - | - | - | - | - | - | - | - | - | - |
| 15.7a | - | - | - | - | - | - | - | - | 3 | 3 | 3 | 3 | 4 | 3 | 3 | 3 | 2 | 2 | 2 | | 3 | 3 | 2 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | - | - | - | - | - | - | - |
| 17.9 | - | - | - | - | - | - | - | - | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | | 2 | 3 | 4 | 14 | 8 | 4 | 3 | 2 | 2 | - | - | - | - | - | - | - | - | - |
| 18.7 | - | - | - | - | 2 | 2 | 3 | 3 | 3 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 5 | | 4 | 5 | 8 | 11 | 8 | 4 | 2 | 2 | 3 | 2 | 2 | 2 | - | - | - | - | - | - |
| 19.7a | - | - | - | - | - | - | - | - | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 4 | 4 | | 4 | 5 | 4 | 4 | 4 | 3 | 2 | 2 | 2 | 2 | 2 | - | - | - | - | - | - | - |
| 20.7 | - | - | - | 2 | 2 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 3 | 4 | 4 | 4 | 5 | 5 | 5 | | 5 | 4 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | - | - | - | - | - | - | - | - |
| 21.8a | - | - | - | - | 3 | 3 | 4 | 4 | 4 | 5 | 4 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 5 | | 5 | 5 | 5 | 4 | 4 | 3 | 4 | 3 | 3 | 3 | 2 | 2 | - | - | - | - | - | - |
| 22.7a | - | - | - | - | - | - | 2 | 2 | 3 | 3 | 4 | 3 | 4 | 5 | 5 | 5 | 4 | 4 | 3 | | 4 | 3 | 3 | 3 | 3 | 2 | - | - | 2 | 3 | 2 | 3 | - | - | - | - | - | - |
| 23.7 | 2 | - | - | - | - | 2 | 2 | 2 | 4 | 3 | 4 | 5 | 5 | 5 | 6 | 6 | 5 | 5 | 4 | | 3 | 3 | 3 | 3 | 2 | 2 | 3 | 3 | 4 | 5 | 3 | 2 | - | - | - | - | - | - |
| 24.6 | - | - | - | - | - | - | 2 | 3 | 5 | 6 | 8 | 9 | 11 | 12 | 14 | 13 | 11 | 9 | 6 | | 5 | 3 | 4 | 3 | 4 | 2 | 2 | 2 | 3 | 4 | 4 | 3 | 3 | 2 | - | - | - | - |
| 26.7 | 2 | - | - | - | - | 2 | 3 | 4 | 5 | 5 | 6 | 8 | 13 | 14 | 15 | 15 | 14 | 13 | 12 | | 11 | 12 | 14 | 16 | 10 | 4 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | - | - | - | - | - |
| 27.6 | - | - | - | - | - | - | 3 | 5 | 8 | 7 | 5 | 8 | 11 | 12 | 13 | 15 | 16 | 17 | 16 | | 14 | 17 | 16 | 14 | 9 | 5 | 3 | 3 | 3 | 3 | 2 | 3 | 2 | 2 | 2 | 3 | 3 | 3 |
| 30.7a | - | - | - | - | - | - | - | - | - | 3 | 3 | 4 | 4 | 4 | 5 | 5 | 4 | 5 | 4 | | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 4 | 5 | 4 | 5 | 5 | - | - | - | - | - |
| 31.7 | - | - | 2 | 3 | 3 | 4 | 5 | 6 | 5 | 4 | 4 | 5 | 5 | 4 | 4 | 5 | 5 | 6 | 6 | | 5 | 4 | 3 | 3 | 3 | 2 | 2 | 3 | 2 | 2 | 3 | 2 | 2 | - | - | - | - | - |

Table 88a

Coronal observations at Sacramento Peak, New Mexico (6374A), east limb

| Date GCT | Degrees north of the solar equator | | | | | | | | | | | | | | | | | | | 0° | Degrees south of the solar equator | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 90 | 85 | 80 | 75 | 70 | 65 | 60 | 55 | 50 | 45 | 40 | 35 | 30 | 25 | 20 | 15 | 10 | 5 | | | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 |
| 1953 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mar 4.7 | 3 | 3 | 3 | 4 | 2 | 2 | 3 | 2 | 3 | 2 | 4 | 5 | 4 | 3 | 3 | 3 | 2 | 2 | 3 | | 2 | 3 | 4 | 5 | 3 | 3 | 3 | 2 | 2 | 2 | - | 2 | 2 | - | 2 | 2 | 2 | 2 |
| 5.7 | 4 | 3 | 4 | 5 | 3 | 4 | 3 | 3 | 4 | 5 | 6 | 4 | 4 | 4 | 3 | 4 | 4 | 5 | 5 | | 6 | 7 | 5 | 5 | 4 | 4 | 4 | 4 | 4 | 2 | 2 | 3 | 2 | 3 | 2 | 3 | 3 | 3 |
| 11.8 | 4 | 2 | 3 | 2 | 2 | 2 | - | - | 3 | 3 | 4 | 4 | 4 | 4 | 5 | 10 | 9 | 8 | 11 | | 6 | 5 | 4 | 4 | 4 | 6 | 5 | 4 | 4 | 4 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 2 |
| 12.7 | 4 | 4 | 4 | 4 | 3 | 2 | 2 | 2 | 2 | 3 | 2 | 3 | 6 | 5 | 5 | 6 | 8 | 8 | 9 | | 10 | 8 | 6 | 5 | 3 | 5 | 6 | 5 | 5 | 4 | 2 | 3 | 2 | 2 | 3 | 2 | 2 | 3 |
| 13.7 | 3 | 3 | 3 | 4 | 2 | 2 | 2 | 2 | 2 | 4 | 3 | 4 | 3 | 3 | 4 | 6 | 8 | 5 | 4 | | 5 | 5 | 5 | 4 | 4 | 5 | 4 | 4 | 5 | 5 | 4 | 2 | 2 | - | 2 | 3 | 3 | 3 |
| 14.7a | 2 | 2 | 2 | 2 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | | 4 | 5 | 4 | 4 | 3 | 3 | 2 | 5 | 3 | 4 | 3 | 2 | 2 | 3 | 2 | 2 | 3 | 2 |
| 15.7a | 2 | 2 | 2 | 2 | 2 | 2 | 2 | - | - | 3 | 3 | 3 | 2 | 2 | 2 | 3 | 3 | 3 | 5 | | 6 | 7 | 5 | 6 | 3 | 2 | 3 | 5 | 5 | 4 | 4 | 2 | 3 | 3 | - | 2 | 2 | 3 |
| 17.9 | 3 | 2 | 2 | 2 | 2 | 2 | - | - | 2 | 3 | 3 | 4 | 4 | 5 | 4 | 4 | 3 | 4 | 5 | | 6 | 8 | 15 | 11 | 9 | 5 | 3 | 4 | 3 | 3 | 2 | - | - | - | 2 | 3 | 2 | 2 |
| 18.7 | 3 | 2 | 3 | 2 | 2 | 2 | - | 2 | 2 | 3 | 5 | 7 | 5 | 4 | 5 | 4 | 4 | 5 | 5 | | 6 | 6 | 14 | 26 | 16 | 5 | 5 | 4 | 3 | 2 | 2 | 3 | 2 | - | 2 | 3 | 3 | 2 |
| 19.7a | 3 | 3 | 3 | 2 | 2 | 2 | 3 | 2 | 3 | 4 | 5 | 6 | 7 | 7 | 5 | 5 | 6 | 4 | 5 | | 7 | 8 | 15 | 14 | 11 | 5 | 3 | 3 | 2 | 3 | 3 | 3 | 2 | 2 | 3 | 2 | 4 | 3 |
| 20.7 | 4 | 4 | 5 | 4 | 4 | 3 | 3 | 2 | 2 | 2 | 3 | 5 | 5 | 7 | 8 | 5 | 5 | 4 | 4 | | 4 | 5 | 5 | 8 | 8 | 7 | 5 | 5 | 5 | 4 | 4 | 3 | 2 | 2 | 2 | - | 4 | 4 |
| 21.8a | 3 | 3 | 2 | - | - | - | 2 | 2 | 3 | 3 | 3 | 2 | 2 | 3 | 3 | 2 | 3 | 3 | 3 | | 3 | 2 | 3 | 4 | 3 | 3 | 2 | 3 | 3 | - | - | - | - | - | - | 2 | 2 | 2 |
| 22.7a | 4 | 3 | 4 | 3 | 3 | 2 | 3 | 2 | 2 | 3 | 4 | 5 | 3 | 3 | 5 | 6 | 7 | 6 | 5 | | 5 | 4 | 5 | 3 | 4 | 4 | 4 | 2 | 2 | - | 2 | 2 | 2 | 2 | 3 | 2 | 3 |
| 23.7 | 4 | 3 | 3 | 4 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 4 | 4 | 5 | 6 | 7 | 8 | 9 | | 7 | 5 | 6 | 5 | 6 | 5 | 5 | 3 | 4 | 3 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 2 |
| 24.6 | 3 | 3 | 3 | 2 | 3 | 2 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 4 | 5 | 7 | 7 | | 6 | 8 | 5 | 6 | 6 | 4 | 4 | 4 | 3 | 2 | 3 | 2 | 3 | 3 | 2 | 3 | 3 | 3 |
| 26.7 | 3 | 4 | 4 | 3 | 3 | 2 | 2 | 2 | 2 | - | 2 | 2 | - | 3 | 2 | 3 | - | 8 | 3 | | 3 | 5 | 6 | 4 | 5 | 5 | 3 | 3 | - | 3 | 2 | 2 | 2 | - | 3 | 2 | - | 3 |
| 27.6 | 4 | 4 | 3 | 3 | 3 | 2 | 3 | 2 | 3 | 2 | 2 | 3 | 2 | 2 | 4 | 2 | 2 | 11 | 5 | | 9 | 11 | 11 | 5 | 2 | 3 | 3 | 2 | 2 | 3 | 3 | - | - | 2 | 2 | 3 | 3 | 3 |
| 30.7a | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 31.7 | 4 | 3 | 4 | 4 | 3 | 2 | 3 | 2 | - | 5 | 4 | 5 | 5 | 3 | 3 | 3 | 4 | 3 | 4 | | 5 | 6 | 5 | 5 | 5 | 5 | 4 | 3 | 4 | 3 | 3 | 2 | 3 | 2 | 3 | 3 | 3 | 3 |

Table 89a

Coronal observations at Sacramento Peak, New Mexico (6702A), east limb

| Date GCT | Degrees north of the solar equator | | | | | | | | | | | | | | | | | | | 0° | Degrees south of the solar equator | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 90 | 85 | 80 | 75 | 70 | 65 | 60 | 55 | 50 | 45 | 40 | 35 | 30 | 25 | 20 | 15 | 10 | 5 | | | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 |
| 1953 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mar 4.7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | - | 2 | 2 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 5.7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2 | | 2 | 3 | 3 | 2 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 11.8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 12.7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 13.7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 14.7a | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 15.7a | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 17.9 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | - | - | - | - | 3 | 2 | - | - | - | - | - | - | - | - | - | - | - | - |
| 18.7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | - | - | - | 2 | 3 | 2 | 2 | - | - | - | - | - | - | - | - | - | - | - |
| 19.7a | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 20.7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 21.8a | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 22.7a | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 23.7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 24.6 | - | - | - | - | - | - | - | - | - | - | - | - | - | 2 | 2 | 2 | 2 | - | - | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 26.7 | - | - | - | - | - | - | - | - | - | - | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | | 2 | 2 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 27.6 | - | - | - | - | - | - | - | - | - | - | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 2 | 2 | | 2 | 3 | 3 | 3 | 2 | 2 | - | - | - | - | - | - | - | - | - | - | - | - |
| 30.7a | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 31.7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

Table 87b

Coronal observations at Sacramento Peak, New Mexico (5303A), west limb

| Date GCT | Degrees south of the solar equator 90 | 85 | 80 | 75 | 70 | 65 | 50 | 55 | 50 | 45 | 40 | 35 | 30 | 25 | 20 | 15 | 10 | 5 | 0° | Degrees north of the solar equator 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1953 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mar 4.7 | - | - | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 3 | 4 | 5 | 4 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | - | - | - | - |
| 5.7 | - | - | - | - | - | - | - | - | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 2 | 4 | 8 | 9 | 8 | 5 | 4 | 3 | 2 | 2 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 |
| 11.8 | - | - | - | - | - | - | - | - | - | 2 | 3 | 3 | 2 | 3 | 4 | 4 | 3 | 3 | 3 | 3 | 5 | 6 | 7 | 8 | 13 | 16 | 15 | 13 | 5 | 4 | 6 | 4 | 3 | 2 | - | - |
| 12.7 | - | - | - | - | - | - | - | 2 | 3 | 3 | 3 | 3 | 2 | 2 | 3 | 3 | 4 | 4 | 4 | 8 | 12 | 13 | 14 | 18 | 22 | 20 | 19 | 11 | 8 | 5 | 11 | 14 | 5 | 3 | 2 | 2 |
| 13.7 | - | - | - | - | - | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 4 | 5 | 5 | 5 | 8 | 13 | 14 | 16 | 18 | 20 | 17 | 15 | 10 | 5 | 5 | 6 | 6 | 2 | - | 2 | 2 |
| 14.7 | - | - | - | - | - | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 2 | 4 | 5 | 6 | 8 | 11 | 14 | 12 | 11 | 11 | 11 | 10 | 8 | 5 | 4 | 3 | 4 | 5 | 3 | 2 | 2 | 2 |
| 15.7 | - | - | - | - | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 3 | 3 | 4 | 5 | 8 | 14 | 14 | 12 | 11 | 8 | 7 | 6 | 5 | 4 | 3 | 3 | 4 | 5 | 4 | 3 | 2 | - | - |
| 17.9a | - | - | - | - | - | - | 2 | 2 | 2 | 3 | 3 | 3 | 2 | 2 | 3 | 4 | 5 | 5 | 5 | 5 | 4 | 5 | 4 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | - | - | - | - |
| 18.7 | - | - | - | - | - | - | - | 2 | 3 | 5 | 4 | 4 | 4 | 4 | 3 | 4 | 5 | 8 | 8 | 5 | 4 | 4 | 5 | 4 | 5 | 4 | 3 | 2 | 2 | 2 | 2 | - | - | - | 2 | 2 |
| 19.7 | - | - | - | - | - | - | - | - | 2 | 3 | 3 | 2 | 2 | 2 | 3 | 3 | 3 | 4 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | - | - | 2 | 2 | - | - | - | - | - | - | - | - |
| 20.7 | - | - | - | - | - | 2 | 2 | 3 | 5 | 5 | 4 | 4 | 4 | 4 | 4 | 3 | 3 | 3 | 2 | 2 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | - |
| 21.8a | - | 4 | 4 | 4 | 3 | 4 | 4 | 5 | 4 | 5 | 4 | 3 | 4 | 3 | 3 | 3 | 4 | 5 | 4 | 3 | 4 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | - | - | - | - | - | 2 | 3 | 3 | - |
| 22.7 | - | - | - | - | - | - | - | - | - | 2 | 2 | 3 | 2 | 2 | 3 | 3 | 5 | 5 | 5 | 4 | 5 | 5 | 4 | 4 | 4 | 3 | 4 | 4 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | - |
| 23.7 | - | - | - | - | - | - | - | 2 | 2 | 3 | 3 | 2 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 5 | 5 | 4 | 3 | 3 | 5 | 5 | 4 | 5 | 4 | 3 | 2 | 2 |
| 24.6 | - | - | - | - | - | - | - | - | 2 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 3 | 4 | 4 | 5 | 5 | 5 | 5 | 6 | 6 | 5 | 4 | 3 | 3 | 2 | - |
| 26.7 | - | - | - | - | - | - | 2 | 2 | 2 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 5 | 5 | 6 | 7 | 4 | 4 | 4 | 2 | 3 | 2 |
| 27.6a | 3 | 3 | - | - | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 3 | 3 | 4 | 3 | 4 | 5 | 5 | 4 | 3 | 3 | 3 | 3 | - |
| 30.7a | - | - | - | - | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | - | - | - |
| 31.7 | - | - | - | - | - | - | - | - | 2 | 3 | 3 | 3 | 2 | 2 | 3 | 13 | 18 | 11 | 3 | 4 | 4 | 4 | 4 | 3 | 3 | 2 | 2 | 3 | 4 | 3 | 3 | 2 | - | - | 2 | 2 | - |

Table 88b

Coronal observations at Sacramento Peak, New Mexico (6374A), west limb

| Date GCT | Degrees south of the solar equator 90 | 85 | 80 | 75 | 70 | 65 | 50 | 55 | 50 | 45 | 40 | 35 | 30 | 25 | 20 | 15 | 10 | 5 | 0° | Degrees north of the solar equator 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1953. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mar 4.7 | 2 | 2 | 3 | 2 | 2 | 2 | - | - | 2 | 2 | 2 | 3 | 3 | 4 | 3 | 4 | 3 | 7 | 10 | 8 | 5 | 3 | 3 | 3 | 5 | 5 | 4 | 4 | 3 | 2 | 2 | 2 | 2 | 3 | 3 | 2 | 3 |
| 5.7 | 3 | 3 | 3 | 2 | 3 | 2 | 2 | 3 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 4 | 6 | 7 | 4 | 3 | 3 | 2 | 3 | 4 | 4 | 4 | 3 | 4 | 3 | 2 | 2 | 2 | 2 | 3 | 5 | 4 | 4 |
| 11.8 | 2 | 3 | 2 | 2 | 3 | 3 | 2 | - | - | 2 | 3 | 4 | 4 | 5 | 4 | 4 | 5 | 4 | 5 | 6 | 5 | 4 | 4 | 4 | 5 | 3 | 2 | 2 | - | 2 | 2 | 2 | 3 | 3 | 3 | 4 | 4 |
| 12.7 | 3 | 4 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 4 | 5 | 6 | 6 | 5 | 4 | 5 | 5 | 6 | 5 | 5 | 6 | 4 | 2 | 3 | 3 | 2 | - | 2 | - | 2 | - | - | 3 | 3 | 4 | 6 | 4 |
| 13.7 | 3 | 2 | 2 | 3 | 3 | 2 | 2 | 2 | 3 | 3 | 4 | 5 | 4 | 4 | 5 | 5 | 4 | 5 | 4 | 5 | 2 | 2 | 2 | 2 | 3 | 3 | 2 | 2 | 3 | 3 | 3 | 2 | 2 | 2 | 3 | 4 | 3 |
| 14.7 | 2 | 3 | - | 2 | - | - | 2 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 2 | - | 2 | 2 | - | 3 | 2 | 2 | 2 | 2 | - | 2 | 2 | 3 | 2 | 3 | 2 |
| 15.7 | 3 | 3 | - | 3 | 3 | 2 | 3 | 3 | 2 | 3 | 2 | 2 | 2 | 3 | 3 | 3 | 5 | 2 | 3 | 3 | 2 | 3 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 4 | 2 | 2 | 2 | 3 | 3 | 3 | 2 |
| 17.9a | 2 | 2 | - | - | 2 | 2 | 3 | 2 | 2 | 3 | - | 2 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 2 | 2 | 3 | 2 | 3 | 3 | 3 | 4 | 3 | 2 | 2 | 2 | 2 | 3 | 3 | 3 |
| 18.7 | 2 | 3 | 2 | 3 | 3 | 2 | 2 | - | 2 | 2 | 3 | 4 | 3 | 3 | 4 | 5 | 5 | 6 | 5 | 5 | 5 | 4 | 3 | 3 | 3 | 3 | 3 | 5 | 5 | 4 | 3 | 3 | 2 | 2 | 3 | 3 | 3 |
| 19.7 | 3 | 3 | 2 | 2 | 2 | 2 | 3 | 2 | 2 | 2 | 3 | 2 | 2 | 3 | 3 | 4 | 4 | 5 | 5 | 4 | 5 | 4 | 3 | 3 | 3 | 4 | 4 | 3 | 3 | 4 | 3 | 2 | 3 | 4 | 3 | 3 | 2 | 3 |
| 20.7 | 4 | 5 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 3 | 4 | 5 | 6 | 5 | 5 | 5 | 7 | 5 | 6 | 7 | 7 | 8 | 5 | 6 | 6 | 5 | 5 | 4 | 3 | 3 | 4 | 2 | 3 | 4 | 4 | 4 |
| 21.8a | 2 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 3 | - | - | - | 3 | 3 | - | - | - | 3 | 3 | - | - | - | - | - | 3 | 2 | 3 |
| 22.7 | 3 | 2 | 2 | 3 | 2 | 2 | 3 | 2 | 2 | 2 | 3 | 5 | 5 | 5 | 8 | 7 | 6 | 5 | 4 | 3 | 3 | 3 | 3 | 4 | 3 | 4 | 4 | 4 | 3 | 3 | 2 | 3 | 2 | 3 | 3 | 4 | 4 |
| 23.7 | 2 | 3 | 2 | 2 | 3 | 2 | 2 | 2 | 3 | 2 | 3 | 4 | 5 | 5 | 6 | 7 | 5 | 6 | 5 | 5 | 6 | 5 | 5 | 5 | 4 | 4 | 4 | 5 | 3 | 2 | 3 | 2 | 3 | 3 | 4 | 4 | 4 |
| 24.6 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 3 | 3 | 4 | 5 | 4 | 5 | 6 | 5 | 6 | 5 | 8 | 7 | 8 | 9 | 6 | 4 | 5 | 5 | 4 | 5 | 4 | 2 | 2 | 3 | 2 | 3 | 3 | 3 | 3 | 3 |
| 26.7 | 3 | 2 | 3 | 2 | 2 | 2 | 2 | 2 | - | 2 | 2 | 3 | 4 | 5 | 4 | 2 | 3 | 3 | 5 | 6 | 8 | 6 | 6 | 6 | 5 | 5 | 4 | 4 | 3 | - | 2 | 3 | 2 | 2 | 3 | 3 | 3 |
| 27.6a | 3 | 2 | 3 | 2 | 2 | 2 | 2 | 3 | 3 | 2 | 2 | 3 | 4 | 3 | 3 | 4 | 3 | 3 | 5 | 5 | 4 | 5 | 4 | 3 | 4 | 3 | 3 | 2 | - | 3 | - | - | 2 | 2 | 2 | 2 | 4 |
| 30.7a | - | - | - | - | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | - | - | - |
| 31.7 | 3 | 3 | 2 | 3 | 2 | 2 | 3 | 2 | - | 2 | 3 | 3 | 3 | 4 | 5 | 11 | 15 | 8 | 9 | 9 | 5 | 5 | 4 | 3 | 3 | 4 | 3 | 4 | 4 | 3 | 4 | 2 | 2 | 3 | 3 | 4 | 4 |

Table 89b

Coronal observations at Sacramento Peak, New Mexico (6702A), west limb

| Date GCT | Degrees south of the solar equator 90 | 85 | 80 | 75 | 70 | 65 | 50 | 55 | 50 | 45 | 40 | 35 | 30 | 25 | 20 | 15 | 10 | 5 | 0° | Degrees north of the solar equator 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 |
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| 1953 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mar 4.7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 5.7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 11.8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2 | 3 | 3 | 3 | 3 | 2 | 2 | - | - | - | - | - | - | - |
| 12.7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2 | 3 | 3 | 2 | 3 | 2 | 2 | 3 | 2 | 2 | - | - | - | - | - | - |
| 13.7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2 | 2 | 2 | 3 | 3 | 2 | 2 | 2 | - | - | - | - | - | - | - | - | - |
| 14.7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 2 | 2 | - | - | - | - | - | - | - |
| 15.7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2 | 2 | 3 | 3 | 2 | 2 | 2 | 2 | - | - | - | - | - | - | - | - |
| 17.9a | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 18.7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 19.7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 20.7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 21.8a | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 22.7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 23.7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 24.6 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 26.7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2 | 2 | 3 | 2 | 2 | 3 | 2 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 27.6a | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 30.7a | - | - | - | - | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | - | - | - |
| 31.7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

Table 90

Zürich Provisional Relative Sunspot Numbers

March 1953

| Date | $R_Z$* | Date | $R_Z$* |
|---|---|---|---|
| 1 | 0 | 17 | 0 |
| 2 | 0 | 18 | 8 |
| 3 | 0 | 19 | 10 |
| 4 | 0 | 20 | 8 |
| 5 | 14 | 21 | 10 |
| 6 | 0 | 22 | 10 |
| 7 | 6 | 23 | 10 |
| 8 | 0 | 24 | 9 |
| 9 | 0 | 25 | 9 |
| 10 | 0 | 26 | 7 |
| 11 | 0 | 27 | 17 |
| 12 | 0 | 28 | 25 |
| 13 | 7 | 29 | 32 |
| 14 | 15 | 30 | 47 |
| 15 | 8 | 31 | 48 |
| 16 | 7 | Mean: | 9.9 |

*Dependent on observations at Zürich Observatory and its stations at Locarno and Arosa.

Table 91

American Relative Sunspot Numbers

February 1953

| Date | $R_A$ ,* | Date | $R_A$ ,* |
|---|---|---|---|
| 1 | 1 | 16 | 0 |
| 2 | 9 | 17 | 0 |
| 3 | 10 | 18 | 0 |
| 4 | 10 | 19 | 0 |
| 5 | 10 | 20 | 0 |
| 6 | 12 | 21 | 0 |
| 7 | 13 | 22 | 0 |
| 8 | 11 | 23 | 0 |
| 9 | 13 | 24 | 0 |
| 10 | 10 | 25 | 0 |
| 11 | 8 | 26 | 0 |
| 12 | 2 | 27 | 0 |
| 13 | 1 | 28 | 0 |
| 14 | 0 | | |
| 15 | 1 | Mean: | 4.0 |

*Combination of reports from 28 observers; see page 10.

## Table 92

## Solar Flares, March 1953

No solar flares were reported for the month of March 1953.

Table 93

Indices of Geomagnetic Activity for February 1953

Preliminary values of international character-figures, C;
Geomagnetic planetary three-hour-range indices, Kp;
Magnetically selected quiet and disturbed days

| Gr. Day 1953 | C | Values Kp three-hour interval 1 2 3 4 | 5 6 7 8 | Sum | Final Selected Days |
|---|---|---|---|---|---|
| 1 | 0.2 | 1o 1+ 2- 1- | 1o 1- 1+ 2o | 10- | Five |
| 2 | 0.2 | 2o 2+ 2o 2- | 1+ 3- 1+ 1o | 14+ | Quiet |
| 3 | 0.2 | 3- 2o 1+ 2+ | 1o 1+ 1+ 1+ | 13+ | |
| 4 | 0.4 | 1+ 2o 1- 2o | 3o 2+ 2o 0+ | 14- | 1 |
| 5 | 0.0 | 0o 0o 0+ 1+ | 1o 2- 2o 0+ | 7- | 5 |
| | | | | | 6 |
| 6 | 0.0 | 0o 0o 1- 1o | 1o 2- 1+ 0+ | 6o | 7 |
| 7 | 0.0 | 0+ 0+ 0+ 1- | 0o 0o 0+ 1- | 3- | 13 |
| 8 | 0.2 | 1- 1o 1o 2- | 2- 1+ 1o 2o | 10+ | |
| 9 | 0.9 | 3- 4- 2o 2+ | 2+ 3- 2+ 4o | 22o | |
| 10 | 0.8 | 2o 0+ 0+ 1+ | 3o 3o 3+ 5- | 18o | |
| 11 | 0.5 | 4- 3- 3o 3- | 2- 1- 2o 2o | 18+ | Five |
| 12 | 0.1 | 1o 1+ 1+ 2- | 2- 2o 2- 0+ | 11o | Disturbed |
| 13 | 0.1 | 0o 0o 1- 0+ | 0+ 0+ 1- 2o | 4+ | |
| 14 | 0.7 | 3o 2o 4- 3o | 1+ 2+ 3+ 1+ | 20o | 22 |
| 15 | 0.7 | 3- 3- 3- 2o | 3- 1o 1+ 4- | 19- | 23 |
| | | | | | 24 |
| 16 | 1.0 | 4+ 2- 3- 3- | 2+ 5- 3o 2- | 23o | 25 |
| 17 | 0.4 | 2+ 3+ 3- 3o | 1+ 2- 2- 1o | 17o | 26 |
| 18 | 0.2 | 0+ 0+ 2o 2- | 1+ 2- 1+ 3- | 11+ | |
| 19 | 0.6 | 2+ 3o 3- 3- | 2+ 3- 2o 3o | 21- | |
| 20 | 0.3 | 3o 1- 1o 1o | 1+ 2+ 2o 1- | 12o | |
| 21 | 0.7 | 4o 3+ 3+ 2- | 1o 2o 2o 2+ | 20- | Ten |
| 22 | 1.3 | 3o 2o 2+ 2+ | 3- 4+ 5- 6o | 27+ | Quiet |
| 23 | 1.5 | 5+ 4o 5+ 5o | 4o 5o 5- 4o | 37+ | |
| 24 | 1.5 | 6- 6o 6o 4- | 5- 5o 5+ 5o | 41+ | 1 |
| 25 | 1.3 | 6- 5- 5+ 5o | 4+ 4o 4- 5o | 38- | 3 |
| | | | | | 5 |
| 26 | 1.5 | 4+ 4+ 5+ 4+ | 5+ 4o 5+ 5- | 39- | 6 |
| 27 | 1.2 | 4o 2+ 4+ 5o | 3+ 4o 3- 5o | 31- | 7 |
| 28 | 1.0 | 3o 6o 3+ 2- | 2+ 3+ 3+ 2+ | 25+ | 8 |
| | | | | | 12 |
| Mean | 0.62 | | | | 13 |
| | | | | | 18 |
| | | | | | 20 |

Table 94

Sudden Ionosphere Disturbances Observed at Washington, D. C.

March 1953

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No sudden ionosphere disturbances were observed during the month of March.

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Note: Observers are invited to send to the CRPL information on times of beginning and end of sudden ionosphere disturbances for publication as above. Address letters to the Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D. C.

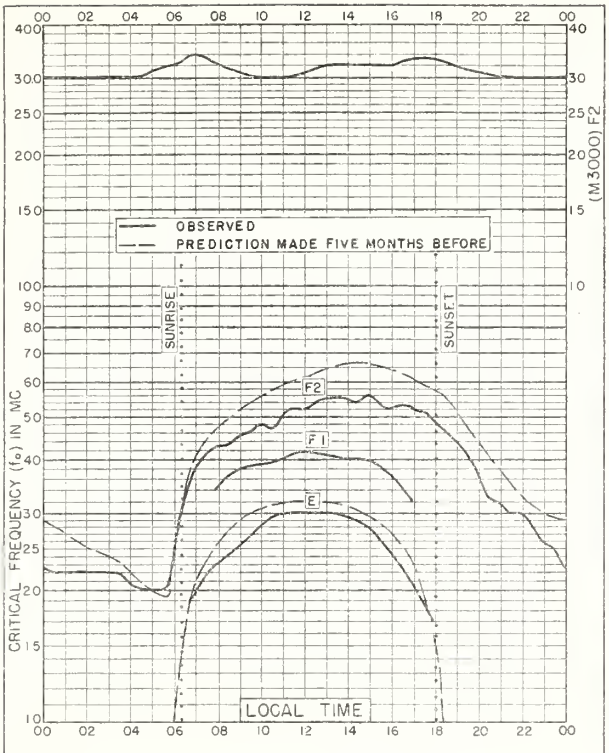



Fig. 1. WASHINGTON, D.C.
38.7°N, 77.1°W MARCH 1953

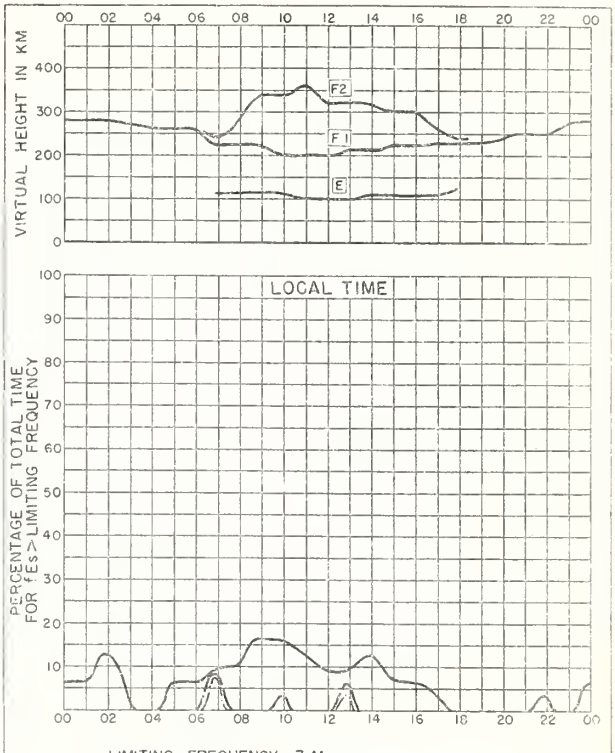



Fig. 2. WASHINGTON, D.C. MARCH 1953

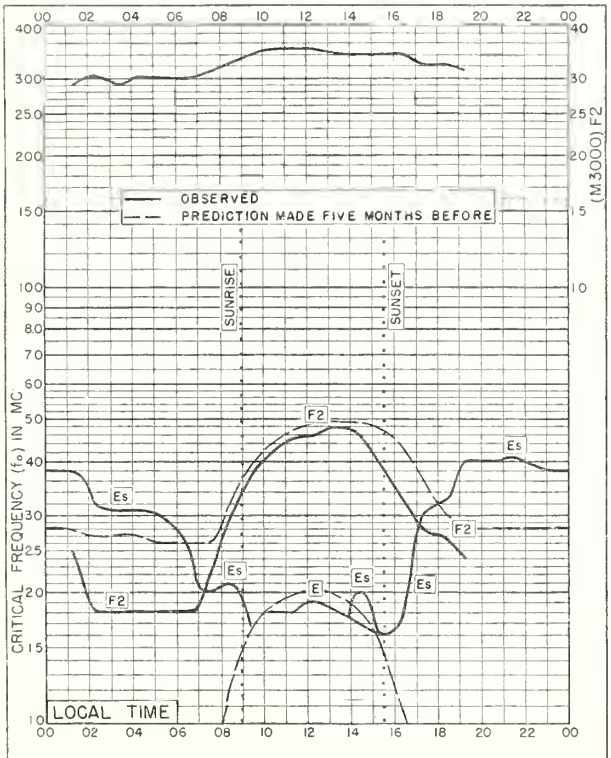



Fig. 3. TROMSO, NORWAY
69.7°N, 19.0°E FEBRUARY 1953

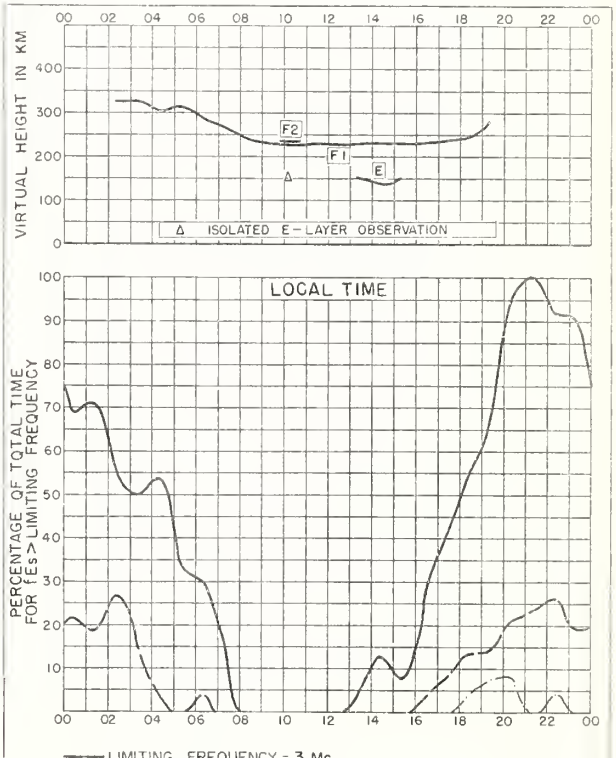



Fig. 4. TROMSO, NORWAY FEBRUARY 1953

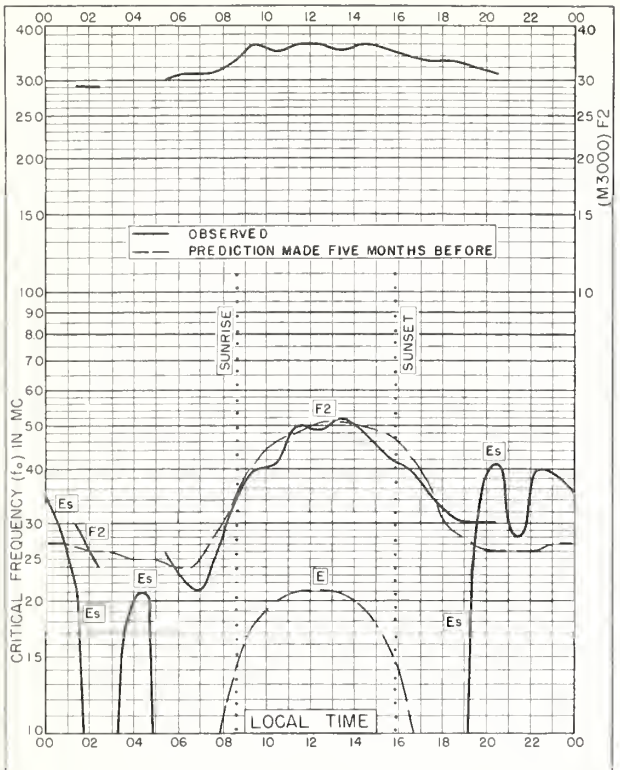



Fig. 5. KIRUNA, SWEDEN
67.8°N, 20.5°E FEBRUARY 1953

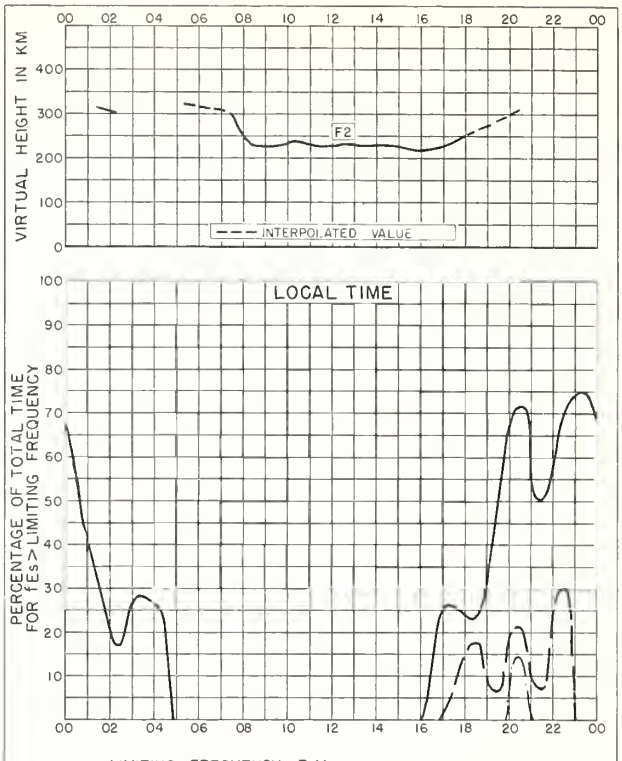



Fig 6. KIRUNA, SWEDEN FEBRUARY 1953

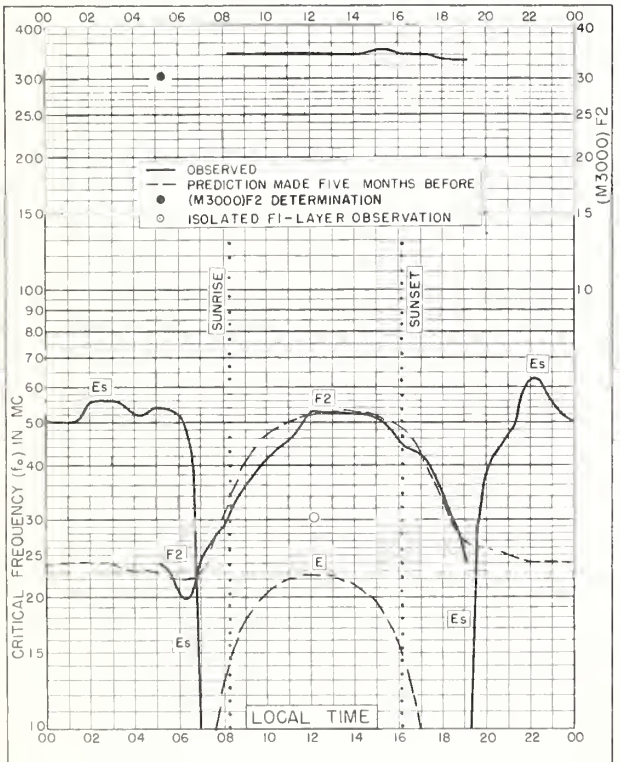



Fig 7. FAIRBANKS, ALASKA
64.9°N, 147.8°W FEBRUARY 1953

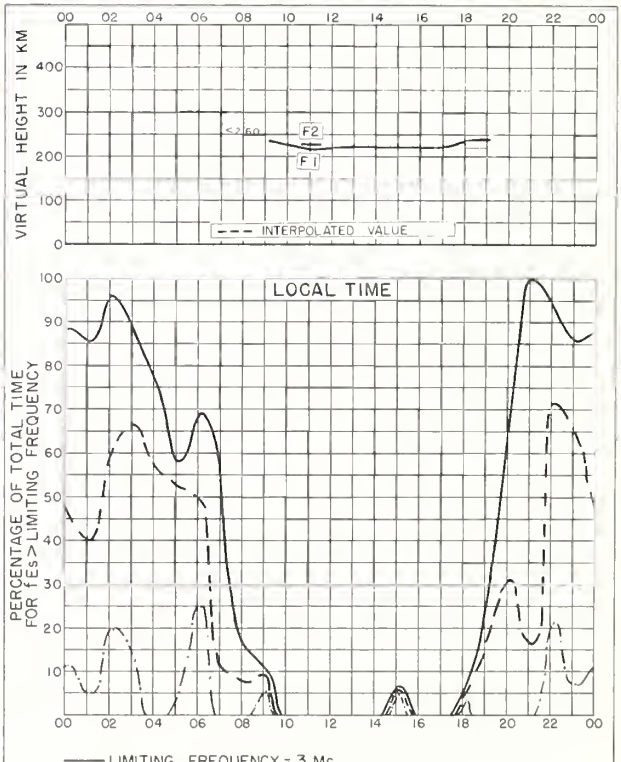



Fig. 8. FAIRBANKS, ALASKA FEBRUARY 1953

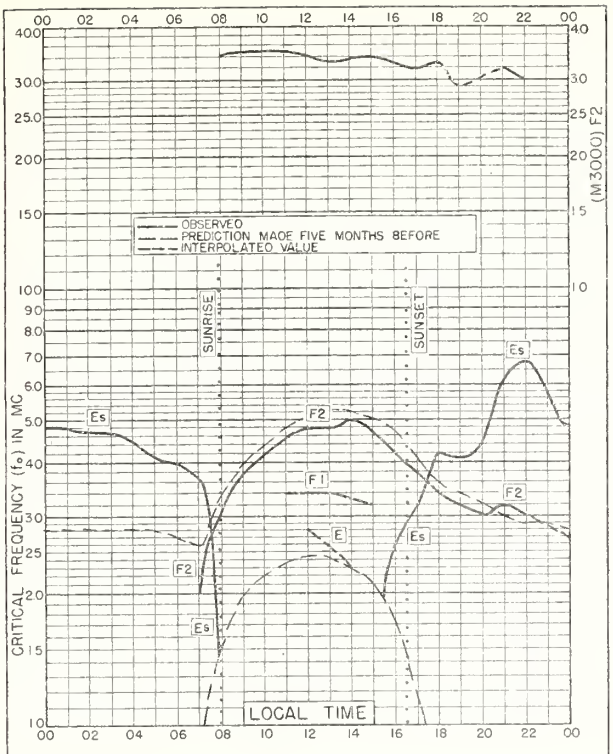
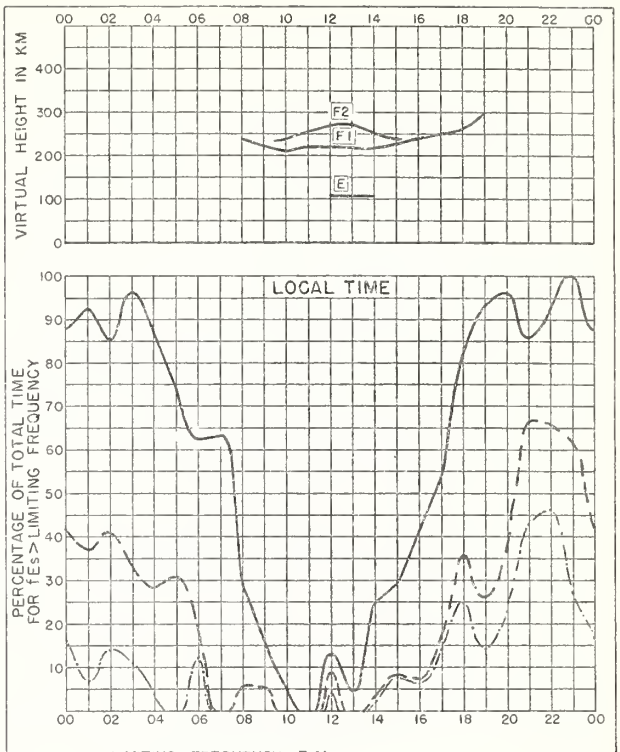



Fig. 9. NARSARSSUAK, GREENLAND
61.2°N, 45.4°W FEBRUARY 1953




FEBRUARY 1953
Fig. 10. NARSARSSUAK, GREENLAND

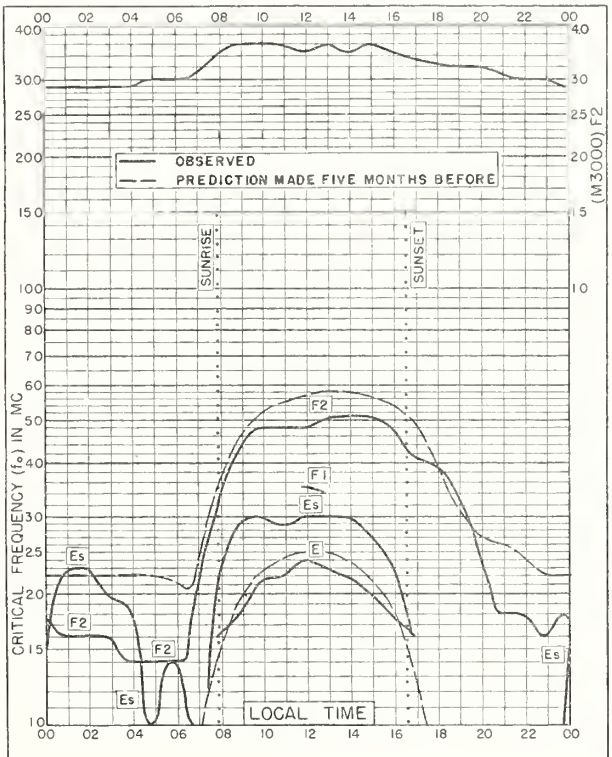



Fig. 11. OSLO, NORWAY
60.0°N, 11.1°E FEBRUARY 1953

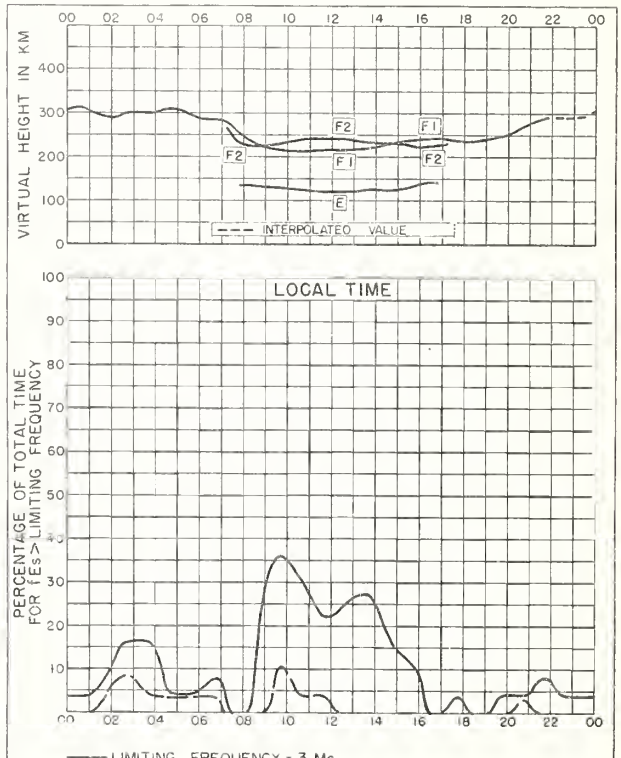



Fig. 12. OSLO, NORWAY FEBRUARY 1953

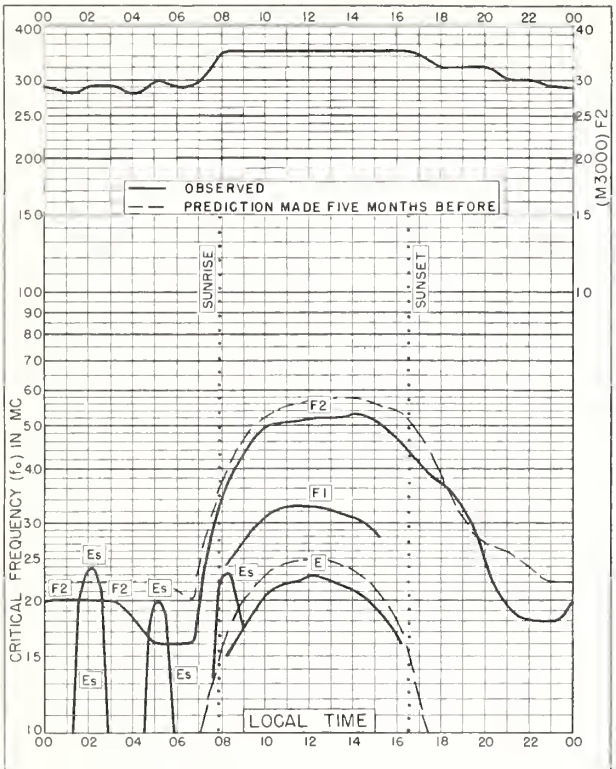



Fig. 13. UPSALA, SWEDEN
59.8°N, 17.6°E FEBRUARY 1953

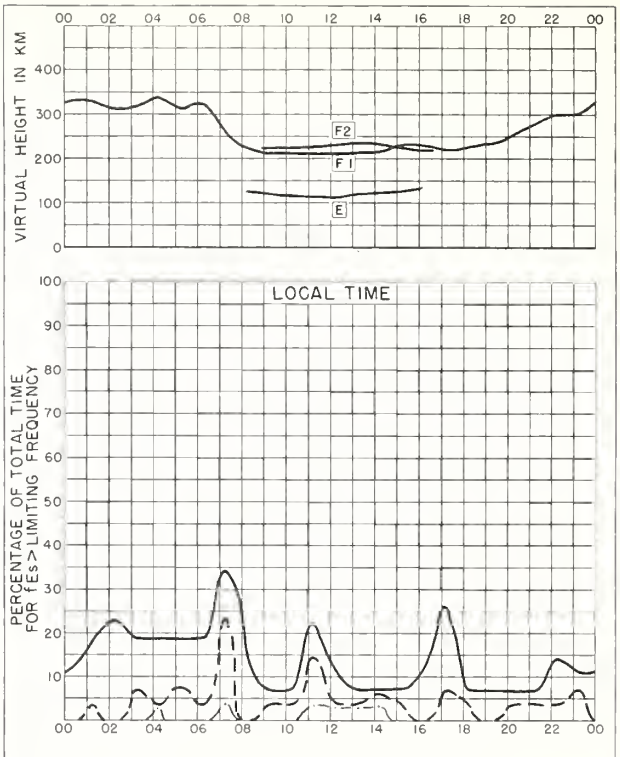



Fig. 14. UPSALA, SWEDEN FEBRUARY 1953

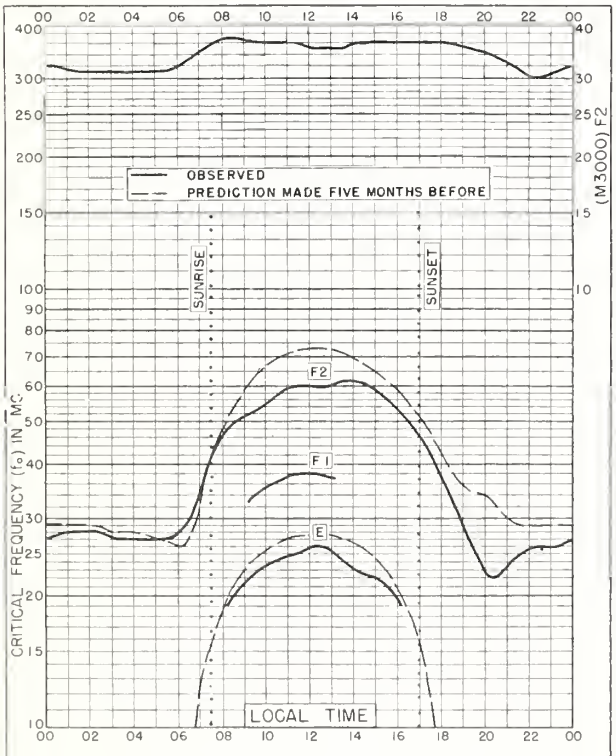



Fig. 15. ADAK, ALASKA
51.9°N, 176.6°W FEBRUARY 1953

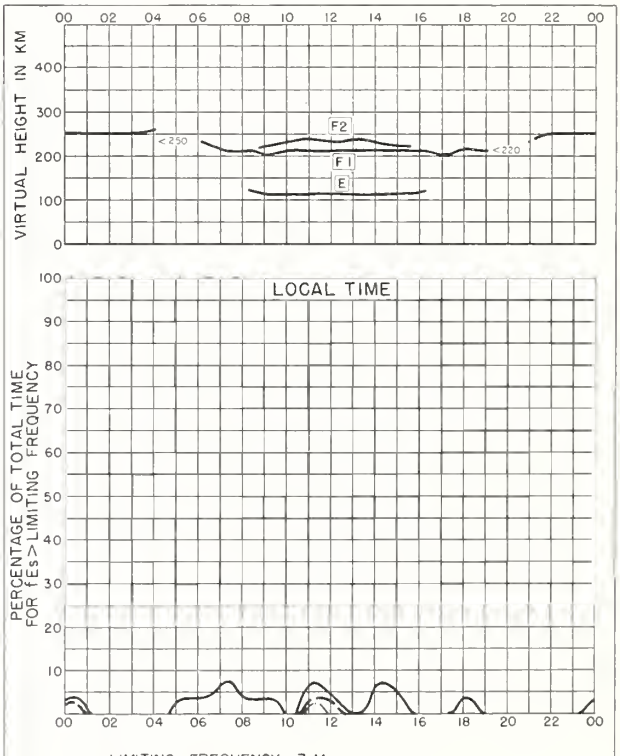



Fig. 16. ADAK, ALASKA FEBRUARY 1953

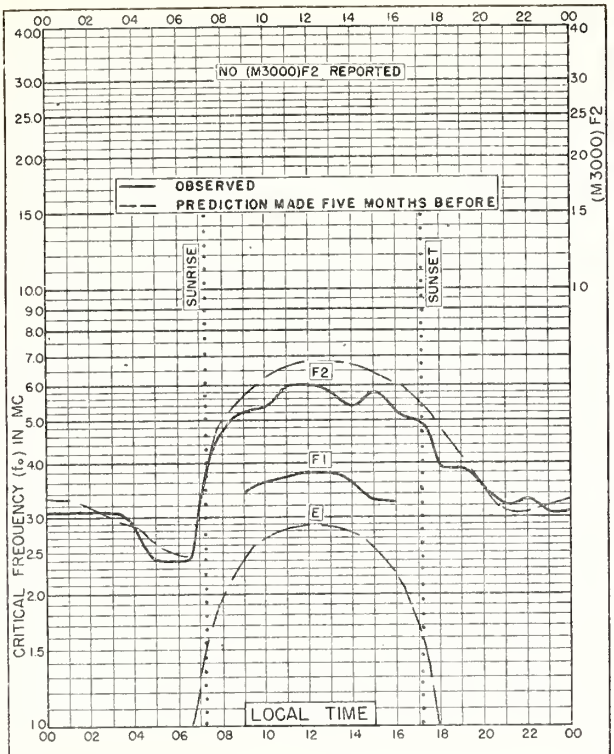



Fig. 17. GRAZ, AUSTRIA
47.1°N, 15.5°E FEBRUARY 1953

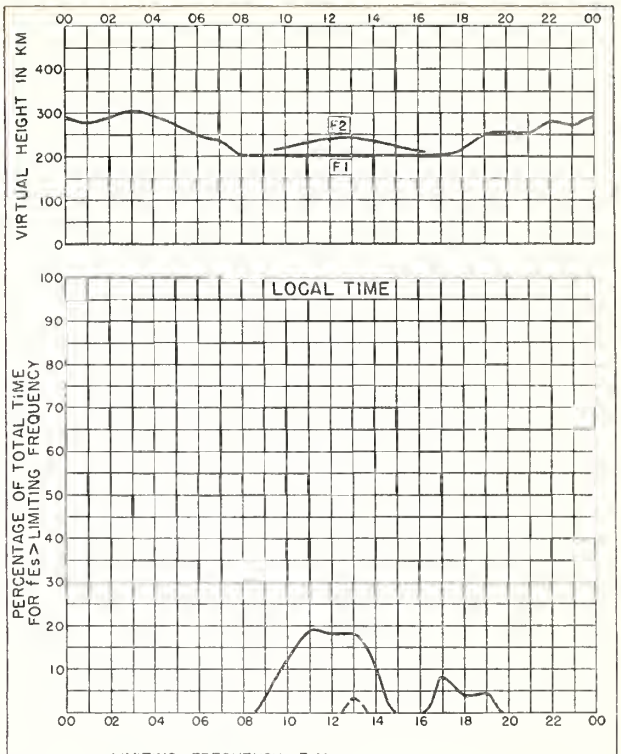



Fig. 18. GRAZ, AUSTRIA FEBRUARY 1953

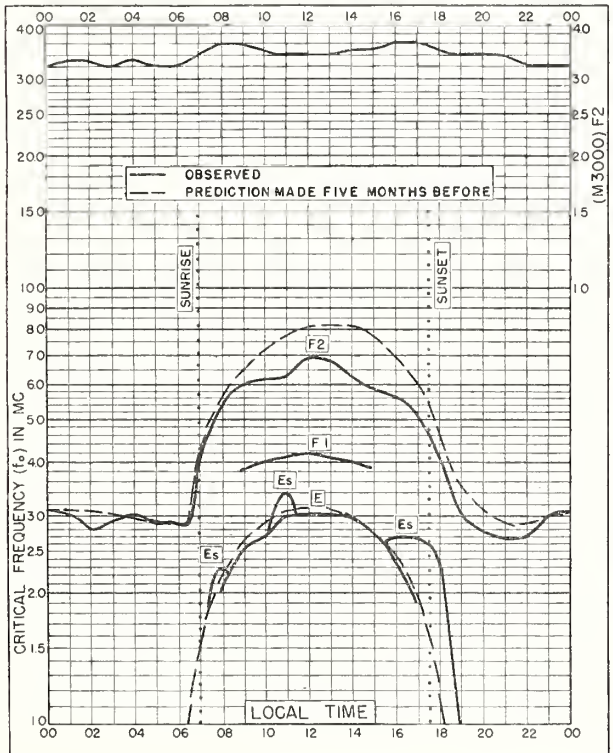



Fig. 19. SAN FRANCISCO, CALIFORNIA
37.4°N, 122.2°W FEBRUARY 1953

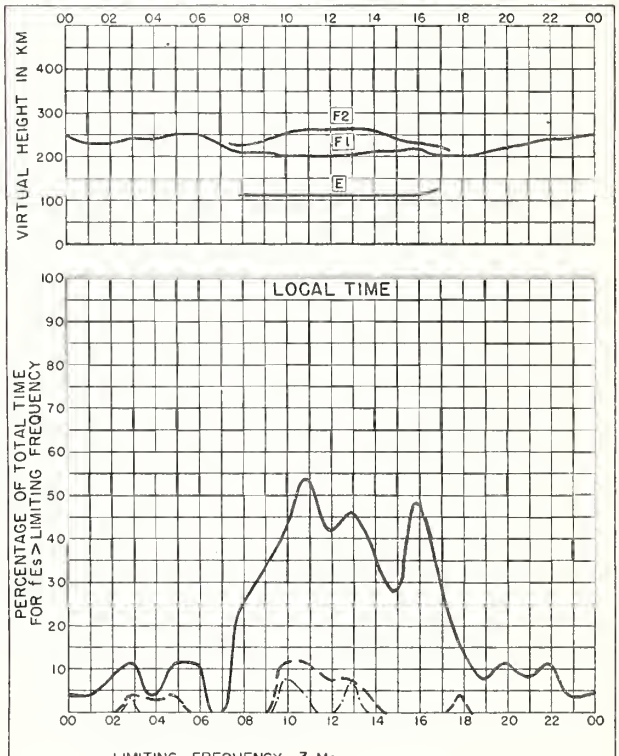



Fig. 20. SAN FRANCISCO, CALIFORNIA FEBRUARY 1953

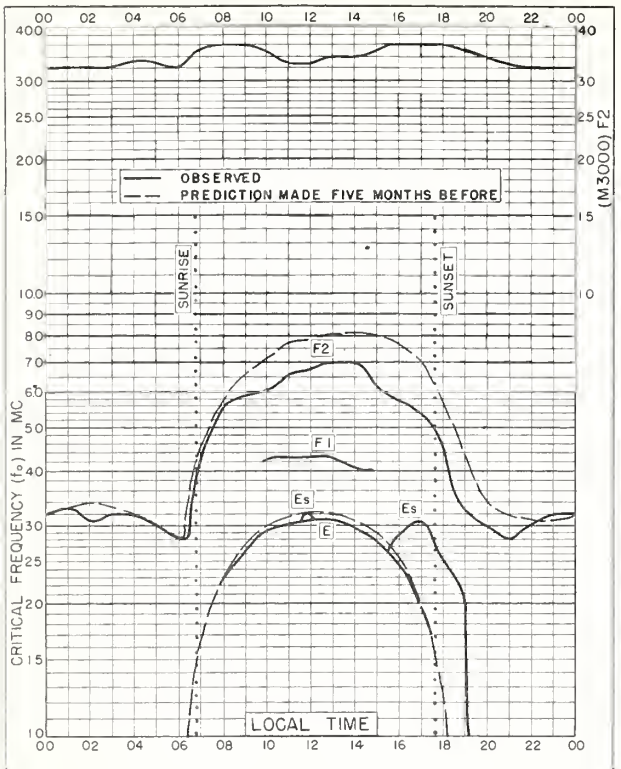



Fig. 21. WHITE SANDS, NEW MEXICO
32.3°N, 106.5°W FEBRUARY 1953

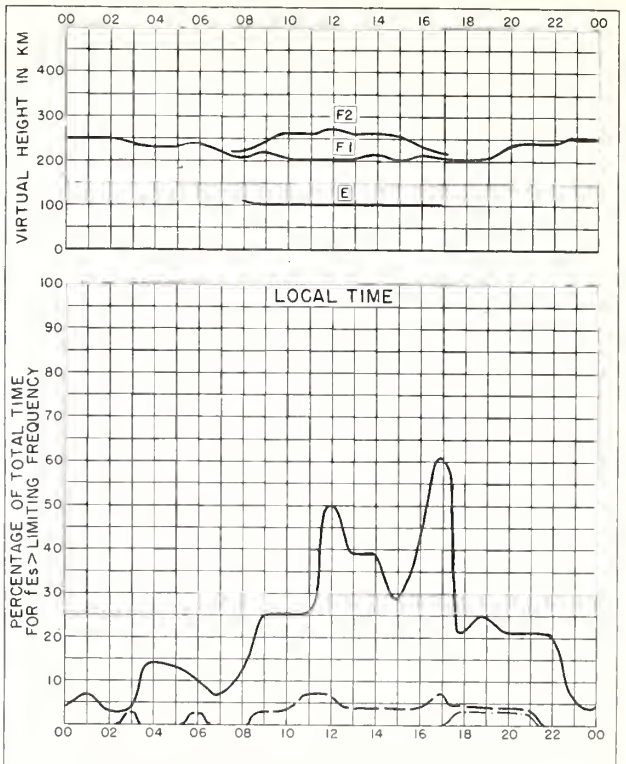



Fig. 22. WHITE SANDS, NEW MEXICO FEBRUARY 1953

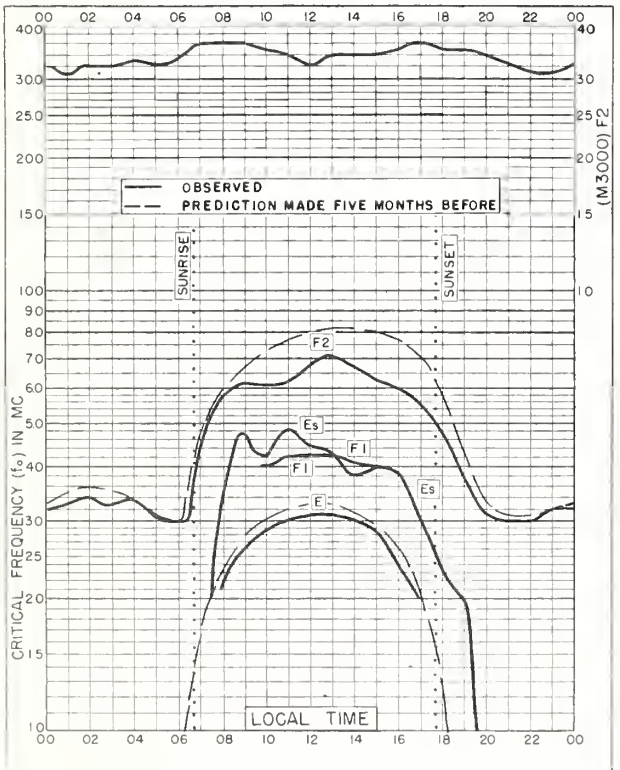



Fig. 23. BATON ROUGE, LOUISIANA
30.5°N, 91.2°W FEBRUARY 1953

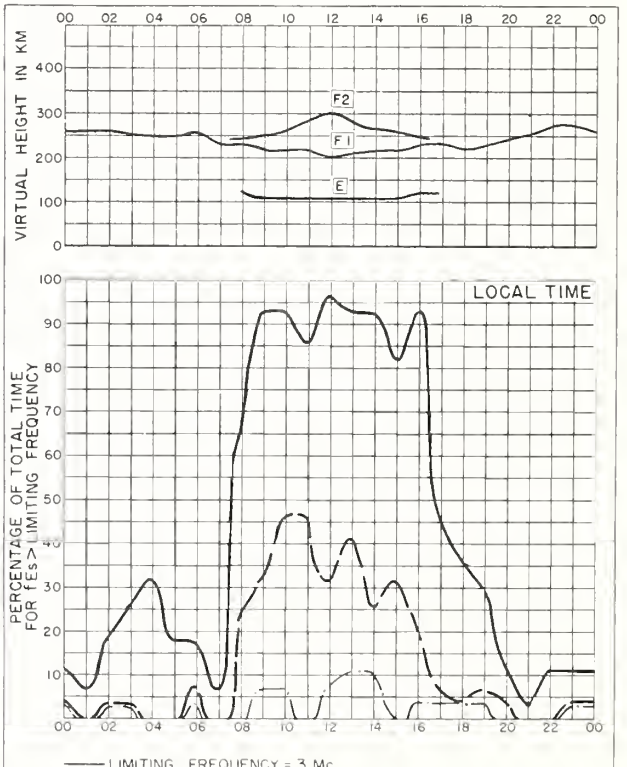



Fig 24. BATON ROUGE, LOUISIANA FEBRUARY 1953

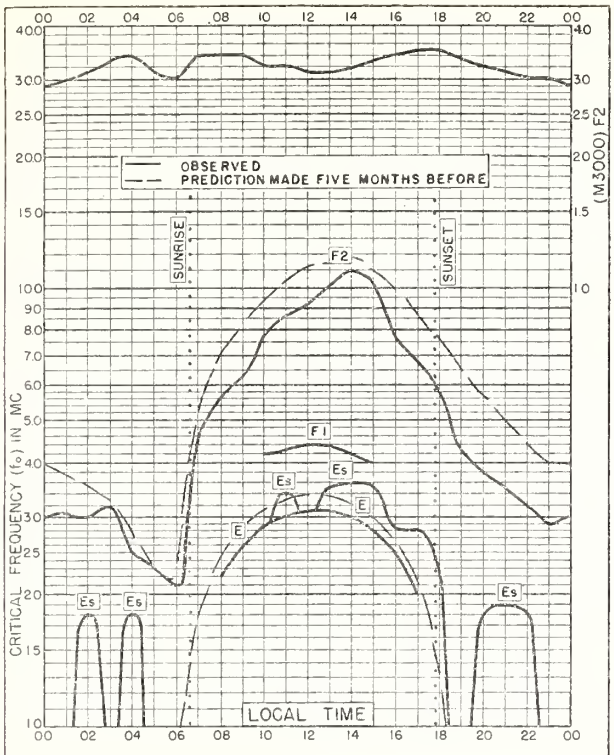



Fig. 25. OKINAWA I.
26.3°N, 127.8°E FEBRUARY 1953

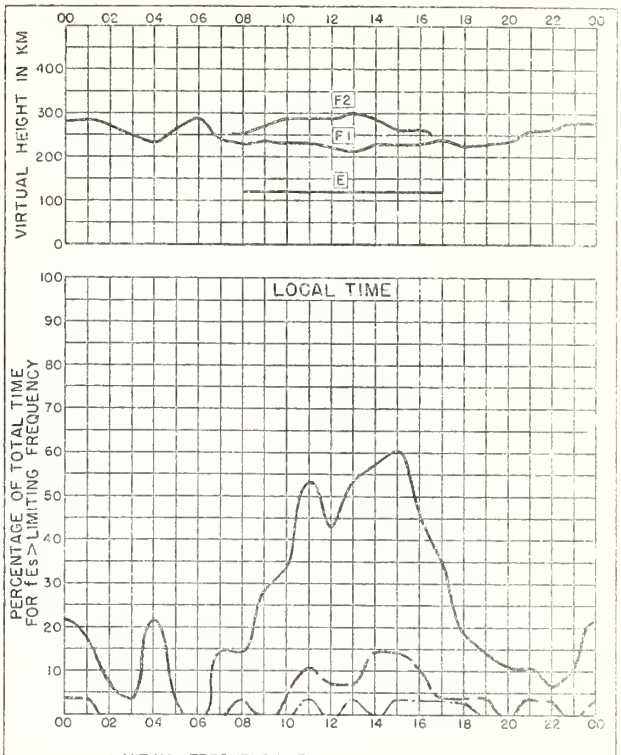



Fig. 26. OKINAWA I FEBRUARY 1953

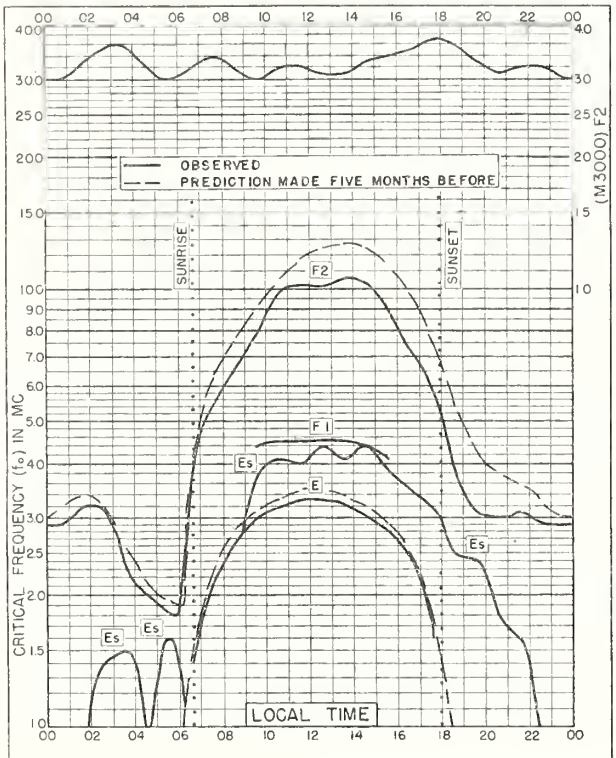



Fig. 27. MAUI, HAWAII
20.8°N, 156.5°W FEBRUARY 1953

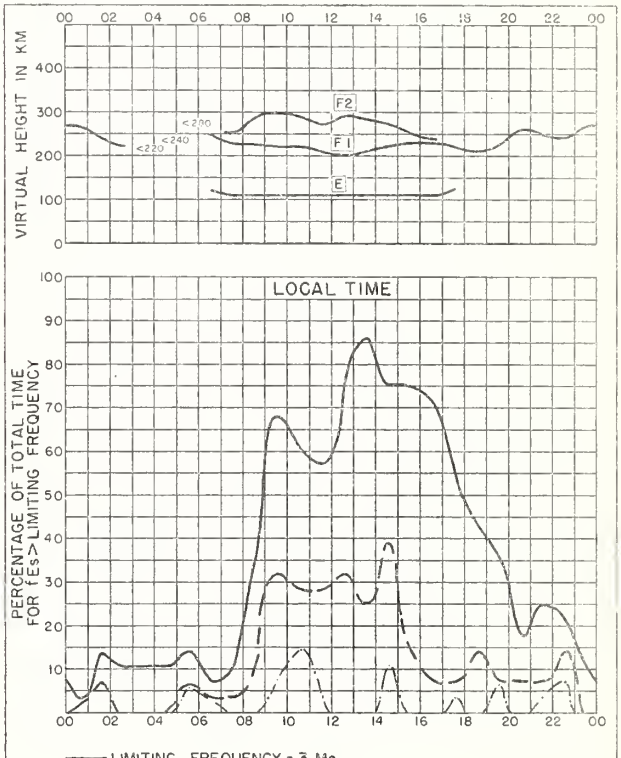



Fig. 28. MAUI, HAWAII FEBRUARY 1953

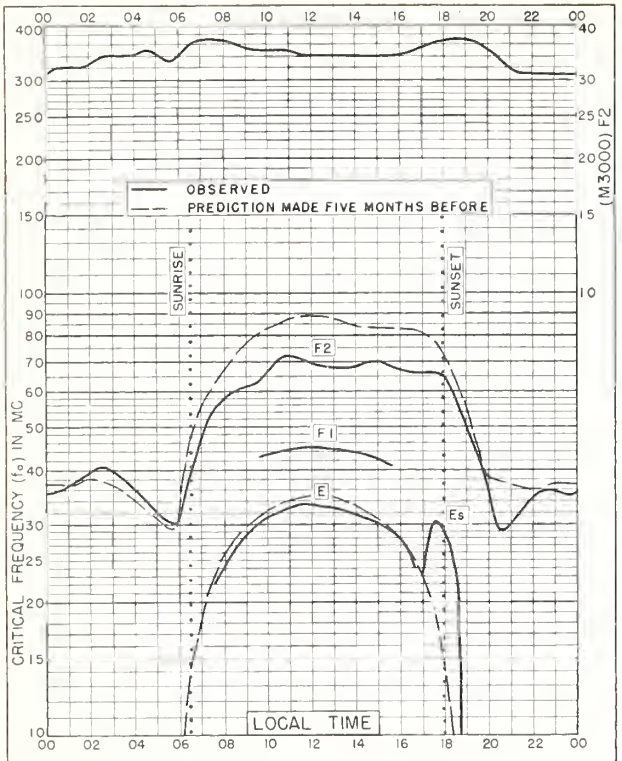



Fig. 29. PUERTO RICO, W. I.
18.5°N, 67.2°W FEBRUARY 1953

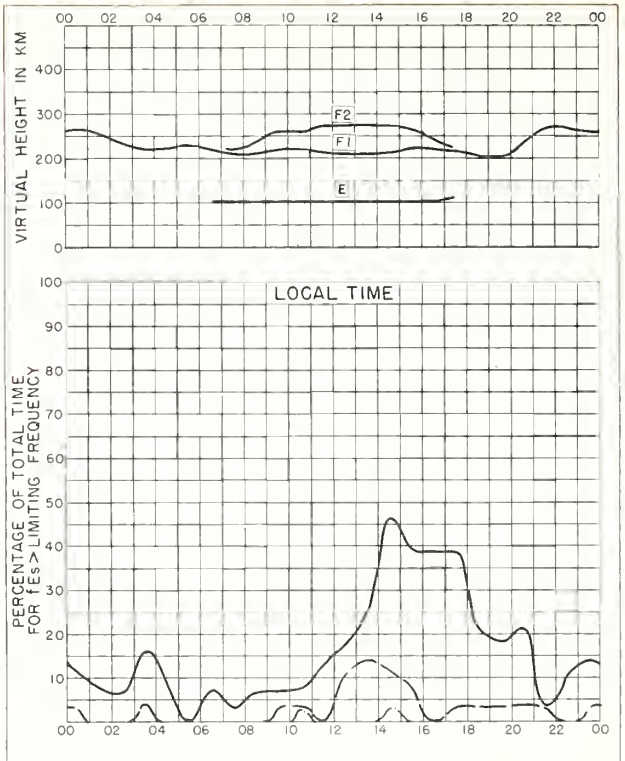



Fig. 30. PUERTO RICO, W. I. FEBRUARY 1953

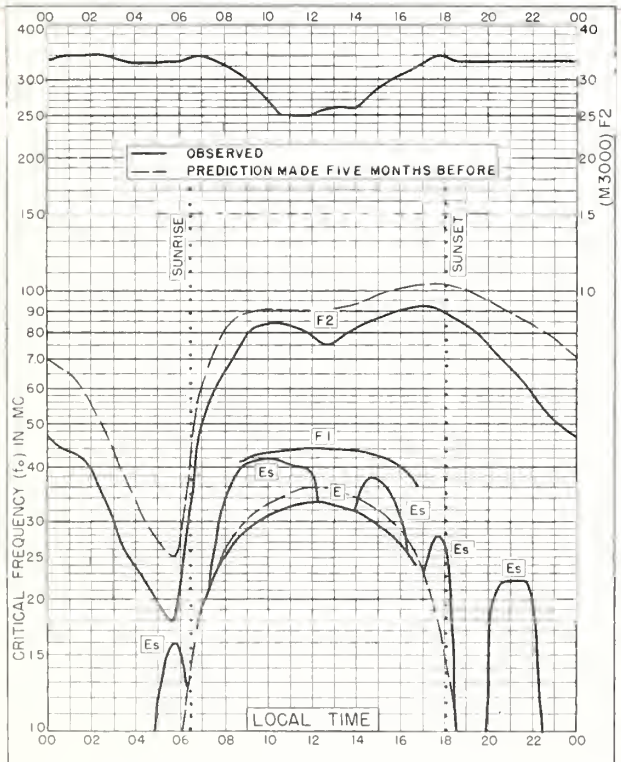



Fig. 31. GUAM I.
13.6°N, 144.9°E FEBRUARY 1953

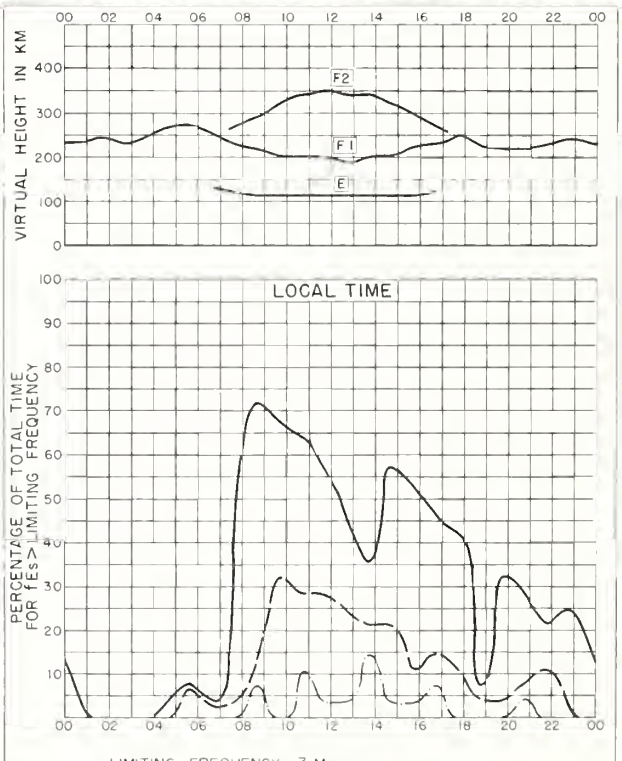



Fig. 32. GUAM I. FEBRUARY 1953

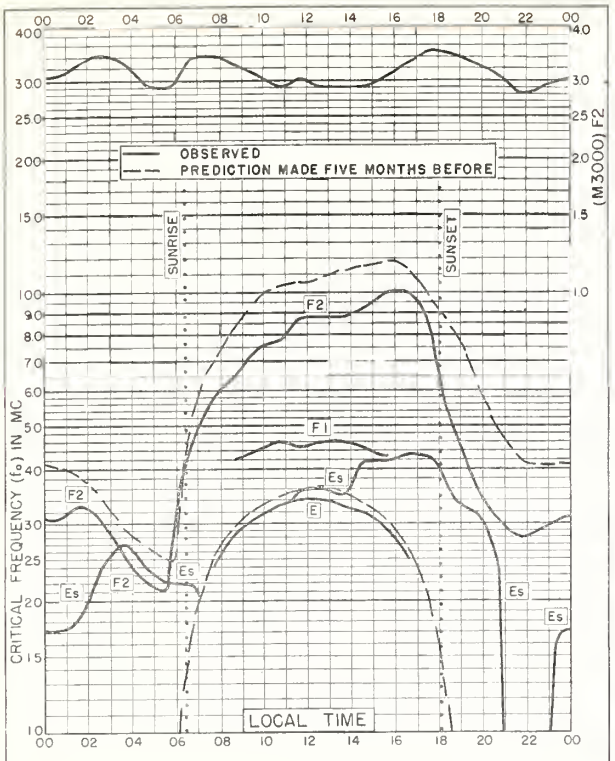



Fig. 33. PANAMA CANAL ZONE
9.4°N, 79.9°W FEBRUARY 1953

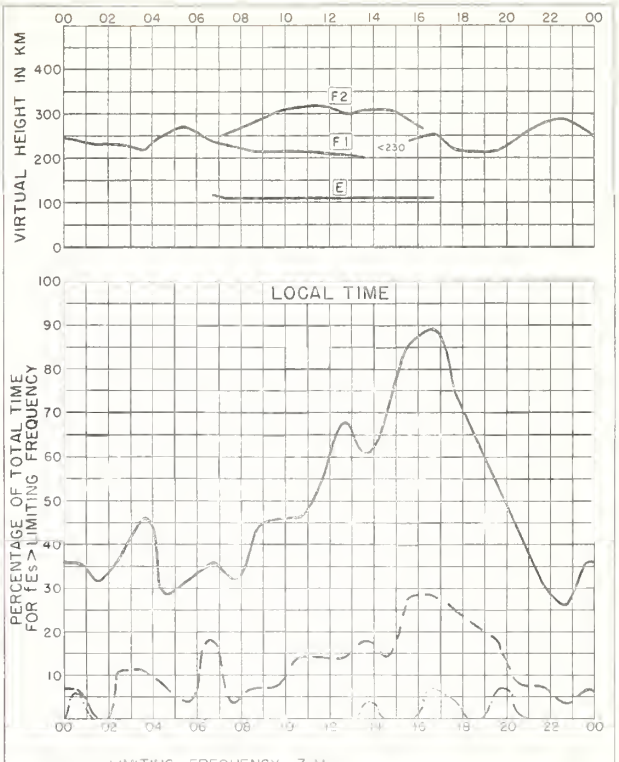



Fig. 34. PANAMA CANAL ZONE FEBRUARY 1953

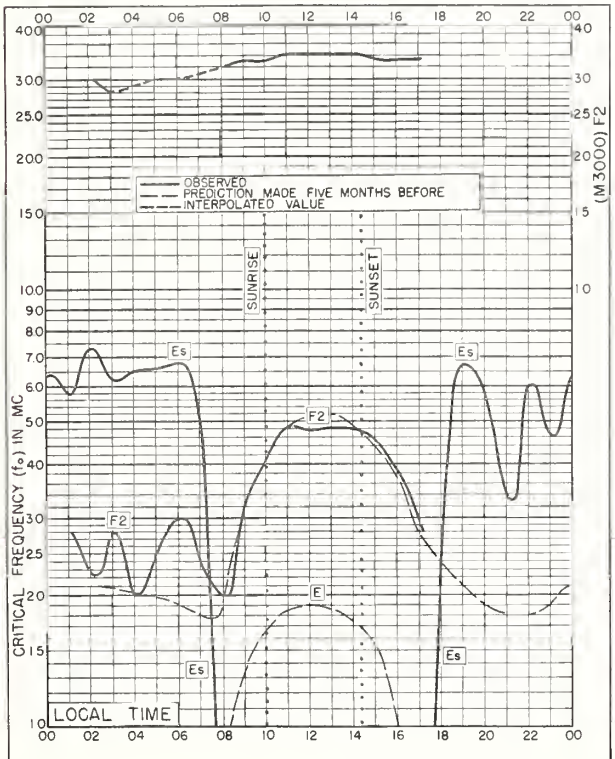



Fig. 35. FAIRBANKS, ALASKA
64.9°N, 147.8°W JANUARY 1953

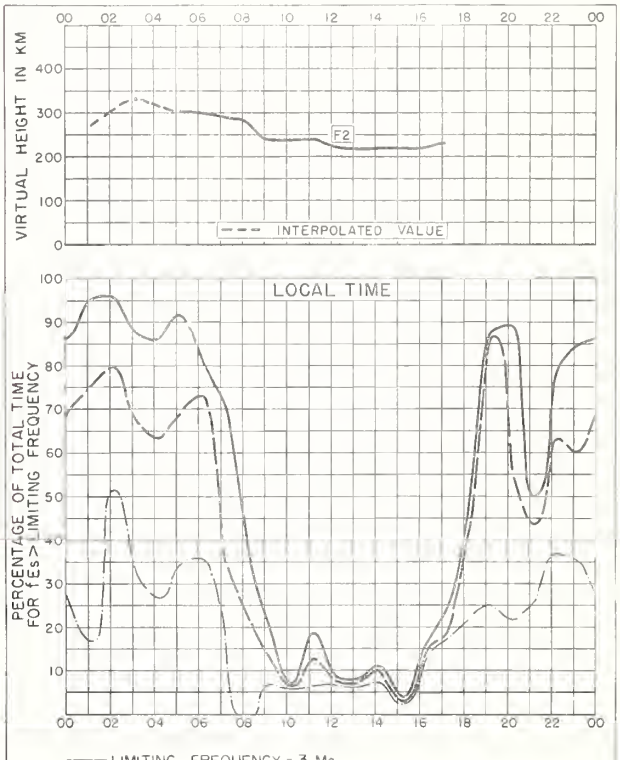



Fig. 36. FAIRBANKS, ALASKA JANUARY 1953

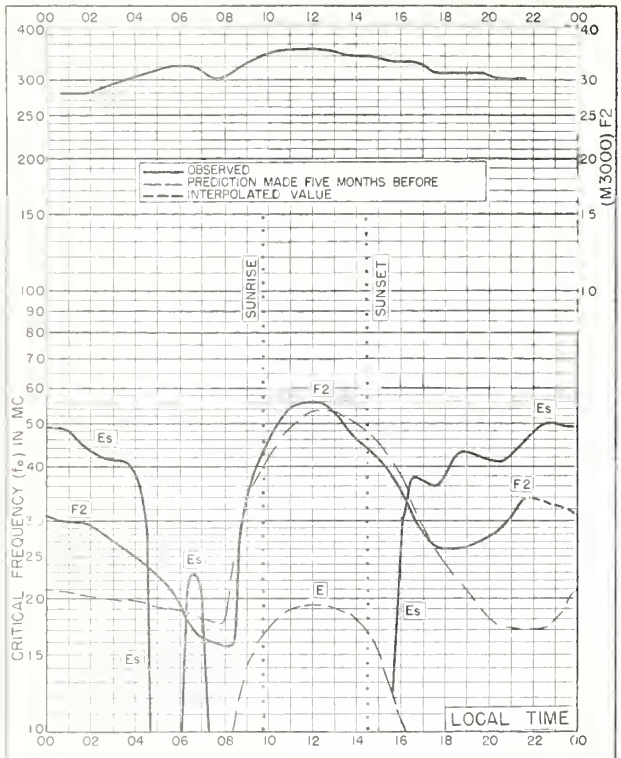



Fig. 37 REYKJAVIK, ICELAND
64.1°N, 21.8°W JANUARY 1953

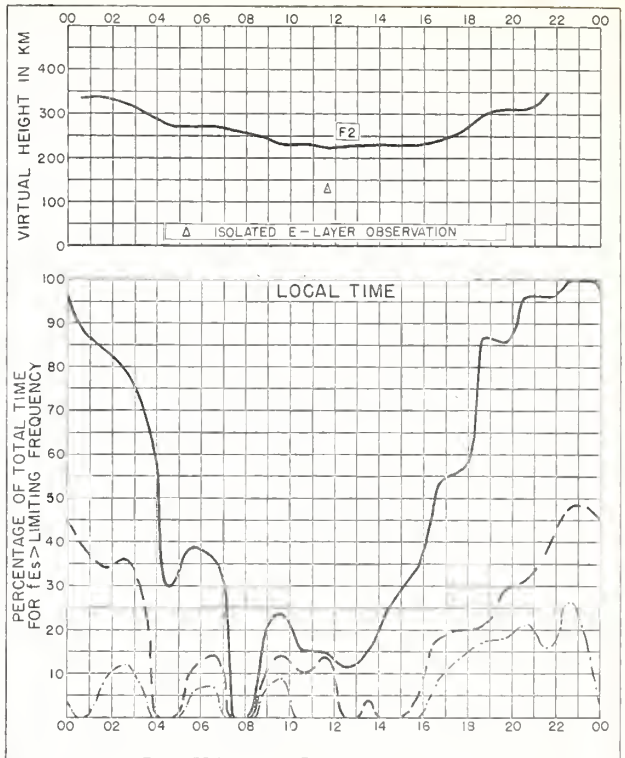



Fig. 38. REYKJAVIK, ICELAND JANUARY 1953

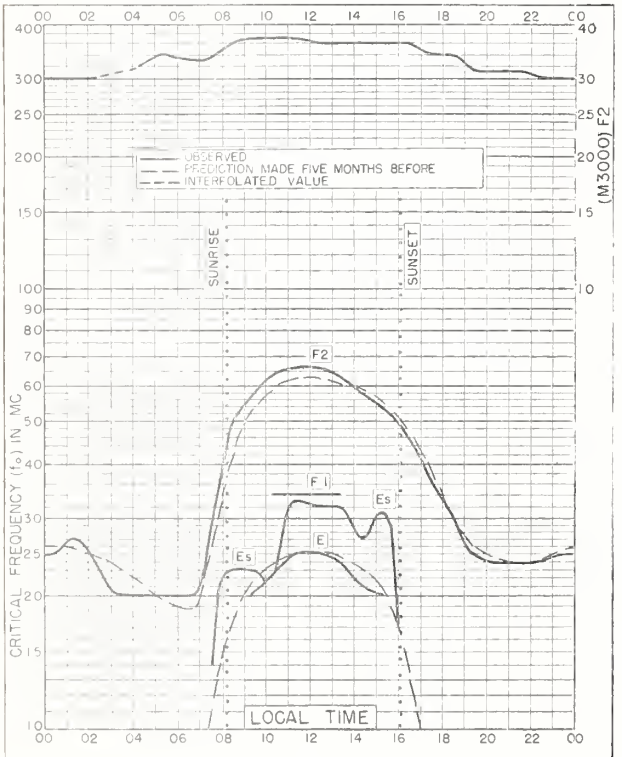



Fig. 39 DeBILT, HOLLAND
52.1°N, 5.2°E JANUARY 1953

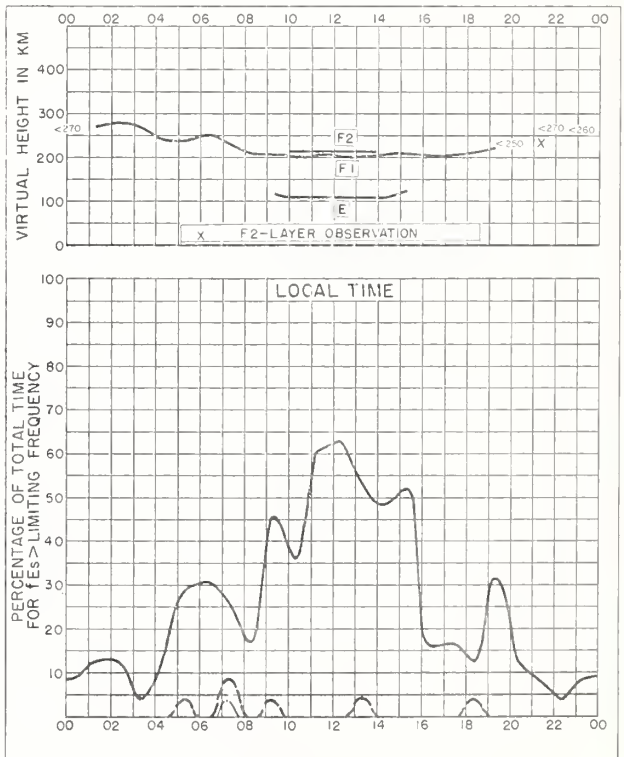



Fig. 40. DeBILT, HOLLAND JANUARY 1953

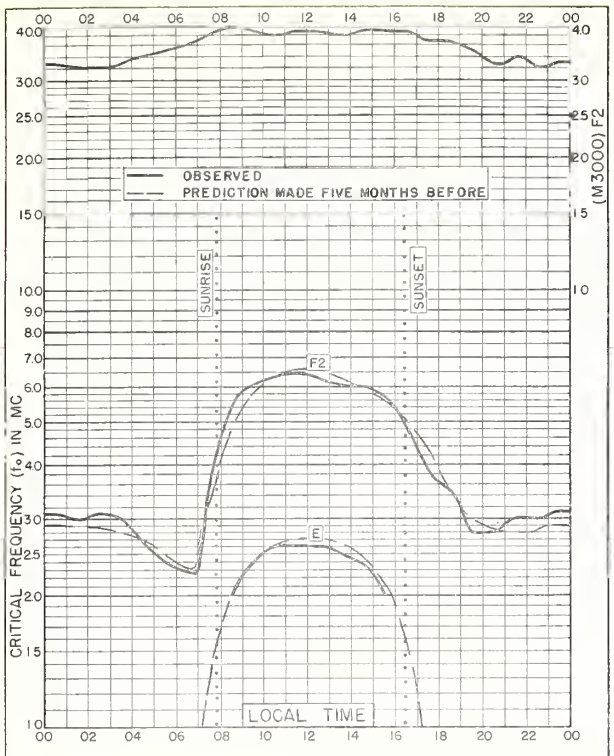
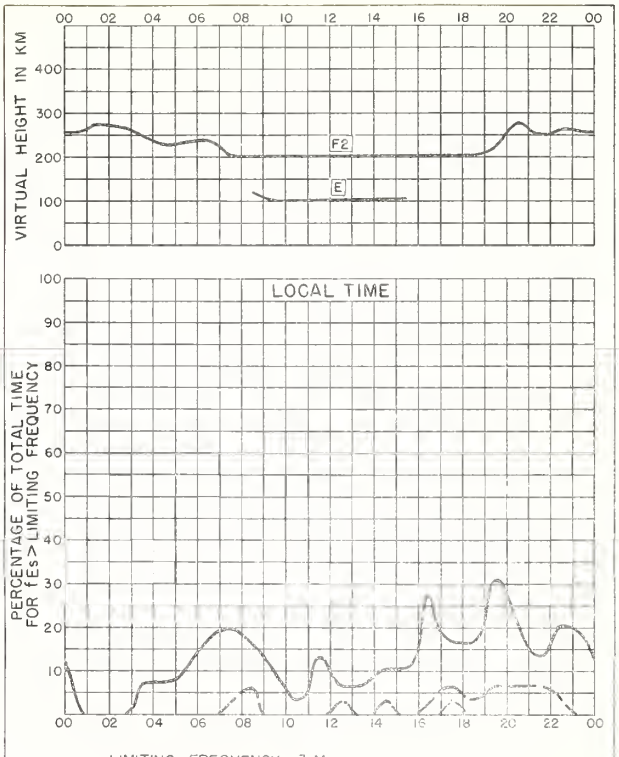



Fig. 41. SCHWARZENBURG, SWITZERLAND
46.8°N, 7.3°E JANUARY 1953




JANUARY 1953
Fig. 42. SCHWARZENBURG, SWITZERLAND

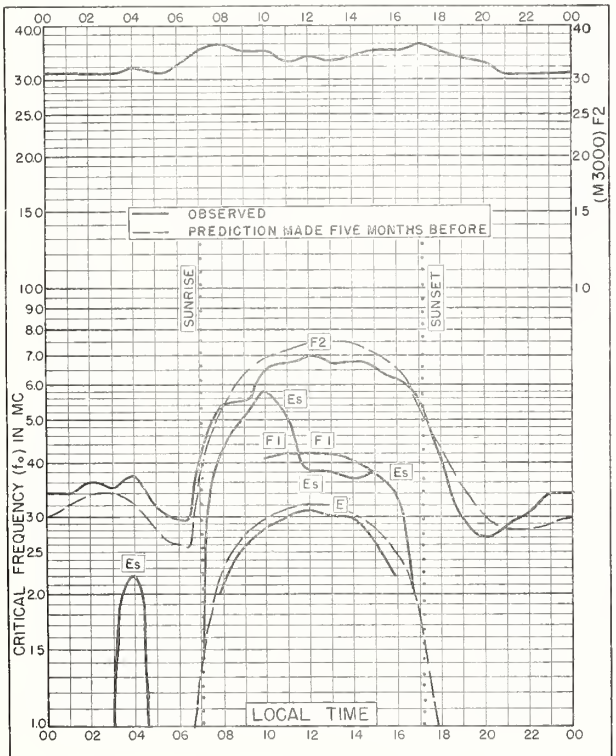
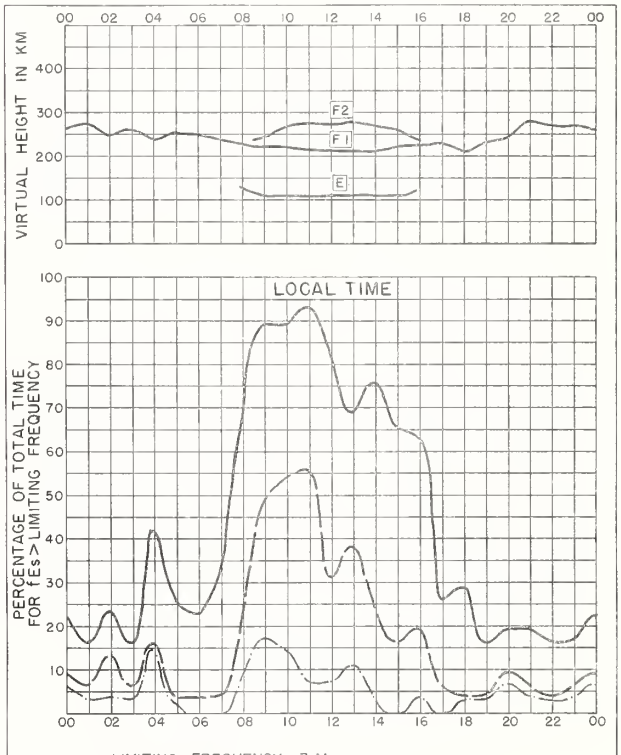



Fig. 43. BATON ROUGE, LOUISIANA
30.5°N, 91.2° W JANUARY 1953




JANUARY 1953
Fig. 44. BATON ROUGE, LOUISIANA

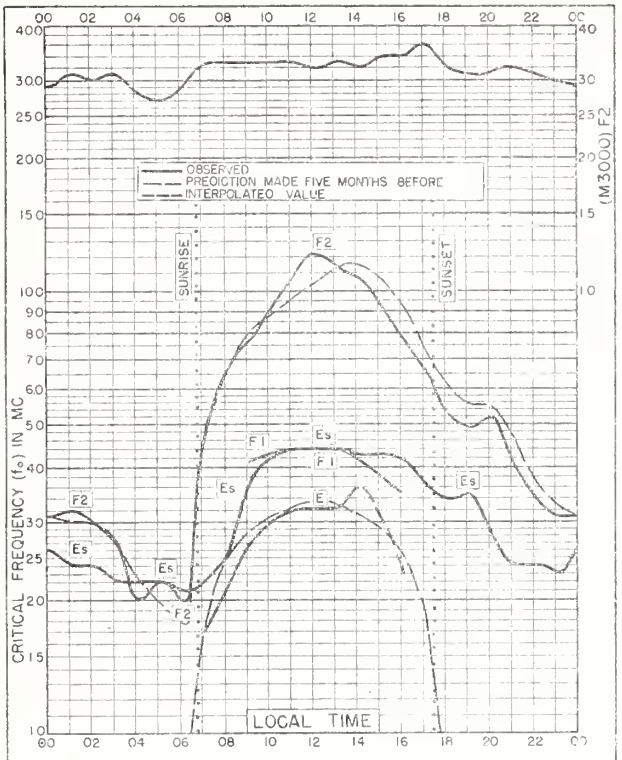



Fig. 45. FORMOSA, CHINA
25.0°N, 121.5°E JANUARY 1953

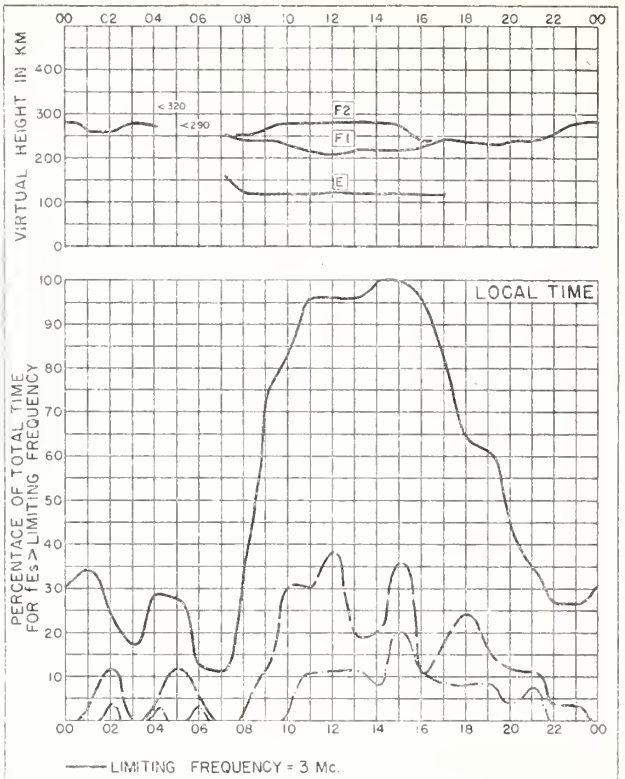



Fig. 46. FORMOSA, CHINA JANUARY 1953

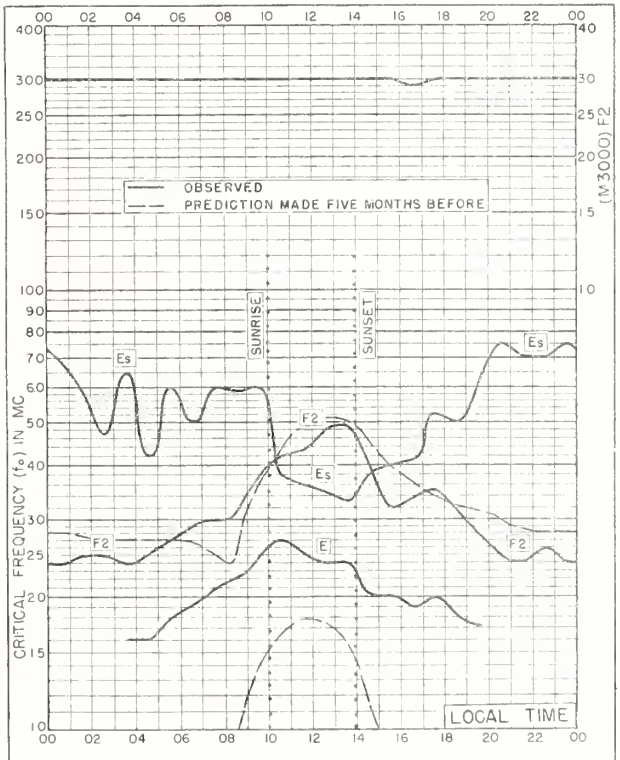



Fig. 47. BAKER LAKE, CANADA
64.3°N, 96.0°W DECEMBER 1952

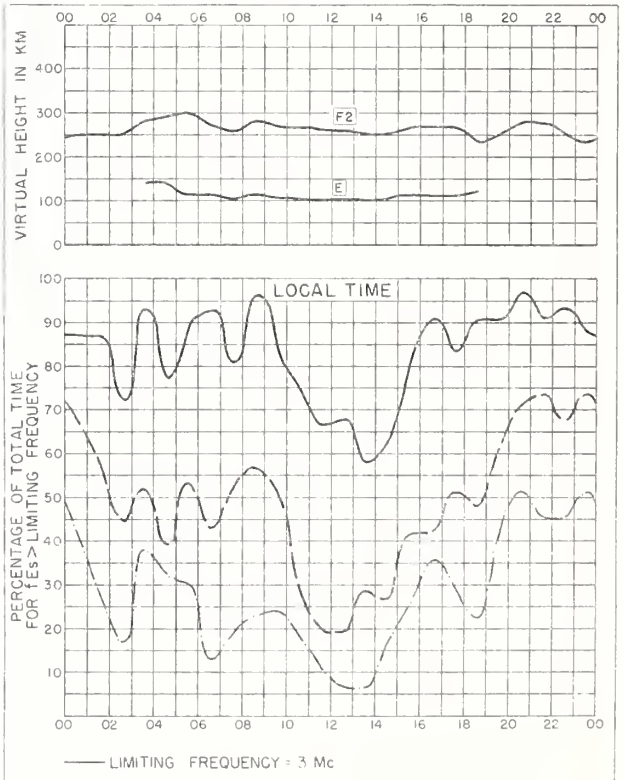



Fig. 48. BAKER LAKE, CANADA DECEMBER 1952

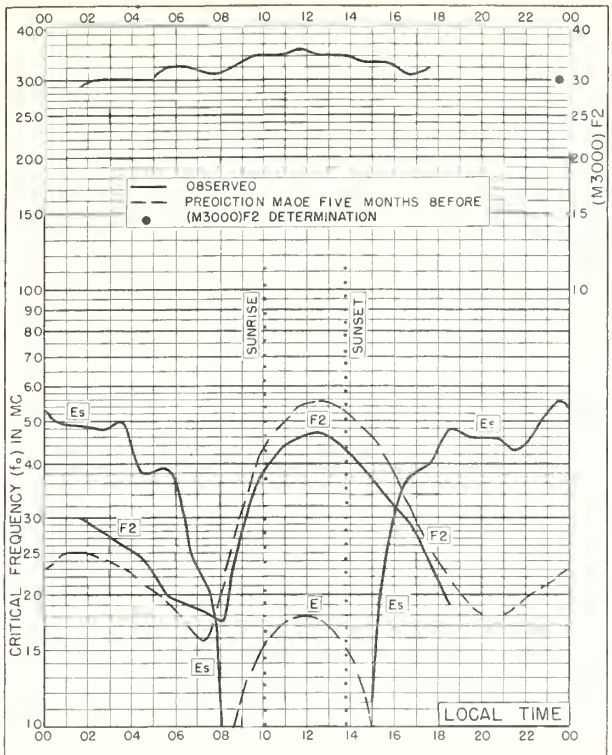



Fig. 49. REYKJAVIK, ICELAND
64.1° N, 21.8° W DECEMBER 1952

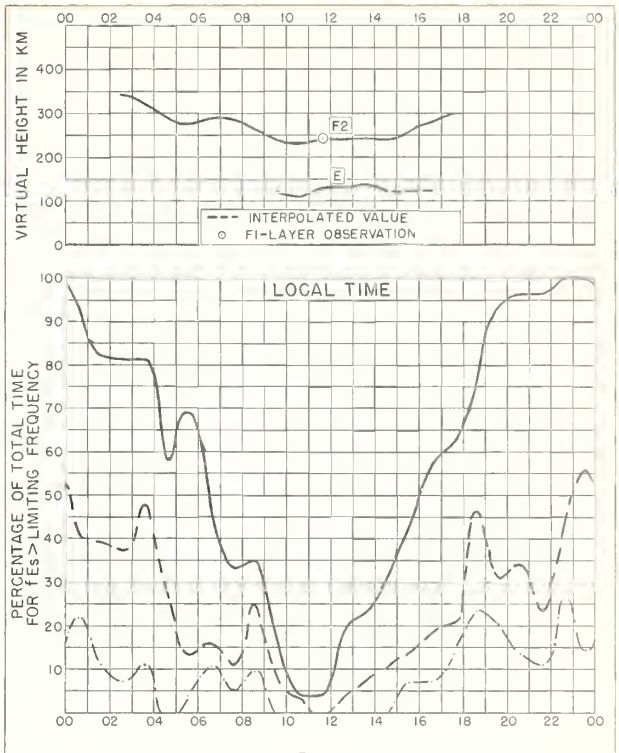



Fig. 50. REYKJAVIK, ICELAND DECEMBER 1952

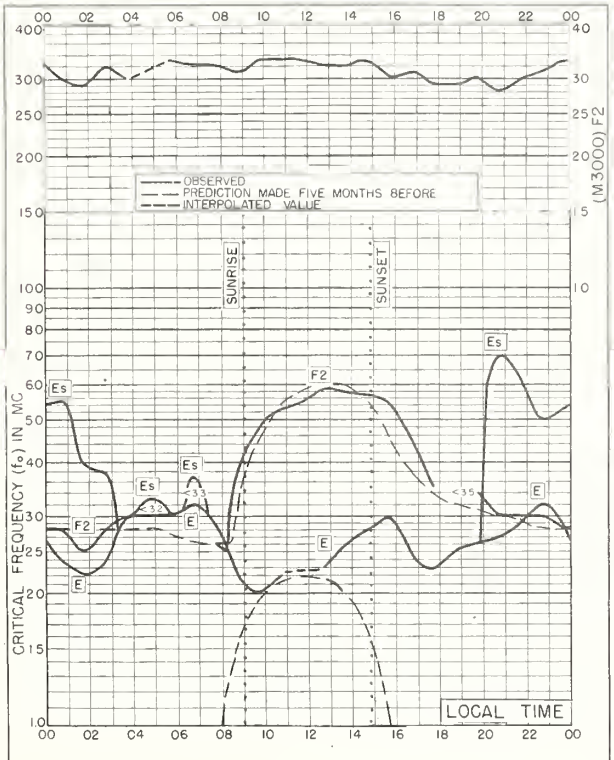



Fig. 51. CHURCHILL, CANADA
58.8°N, 94.2°W DECEMBER 1952

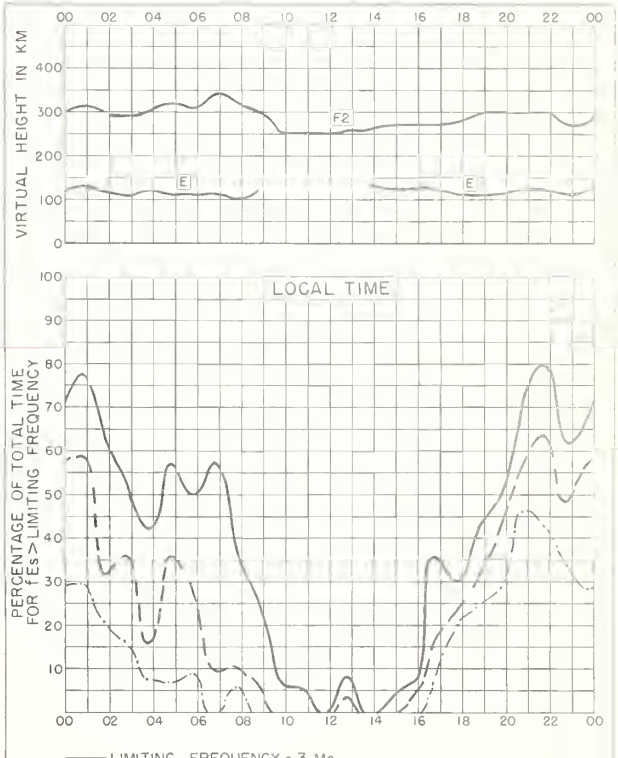



Fig. 52. CHURCHILL, CANADA DECEMBER 1952

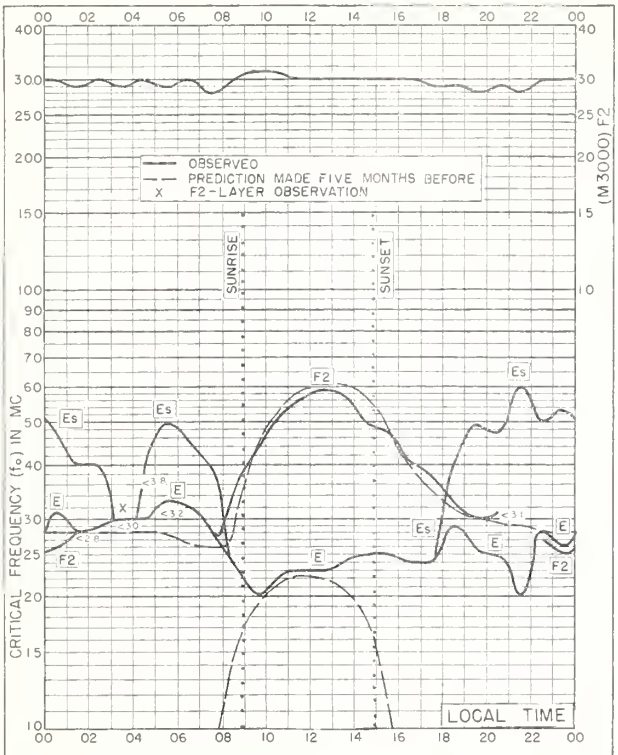



Fig. 53. FORT CHIMO, CANADA
58.1°N, 68.3°W DECEMBER 1952

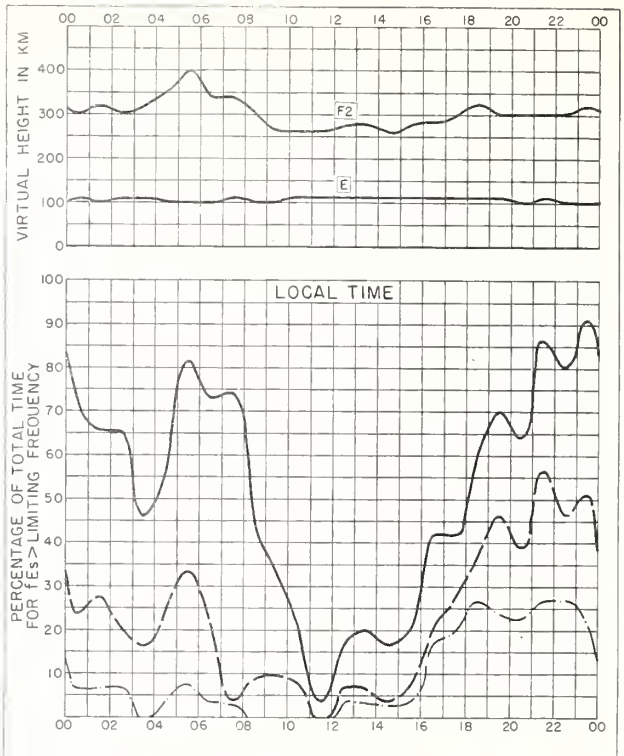



Fig. 54. FORT CHIMO, CANADA DECEMBER 1952

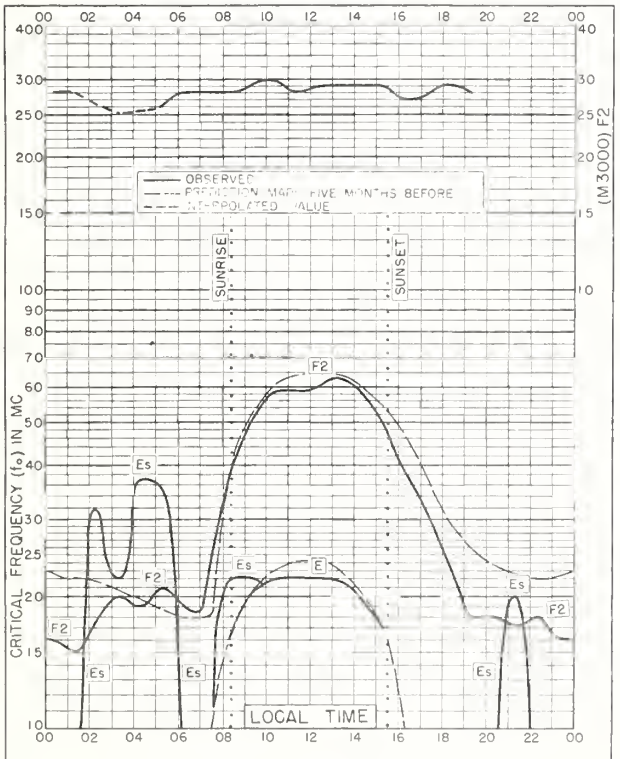



Fig. 55. PRINCE RUPERT, CANADA
54.3°N, 130.3°W DECEMBER 1952

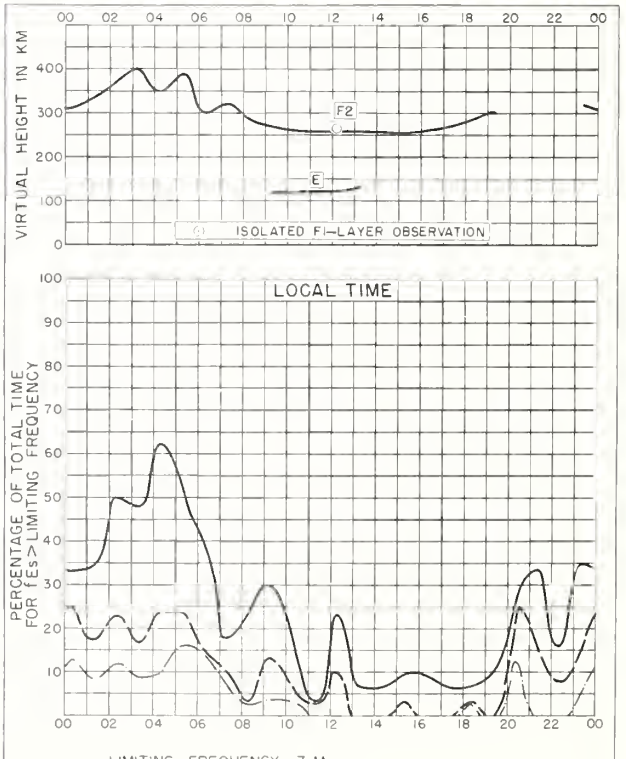



Fig. 56. PRINCE RUPERT, CANADA DECEMBER 1952

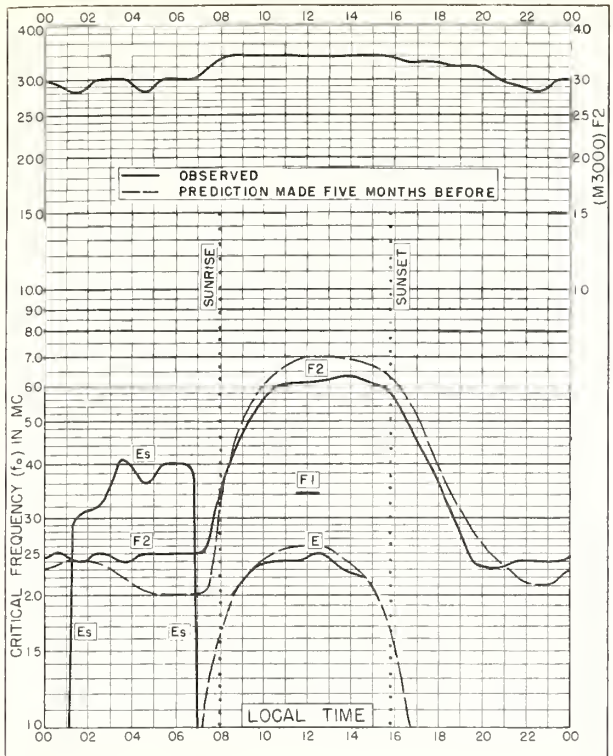



Fig. 57. WINNIPEG, CANADA
49.9°N, 97.4°W DECEMBER 1952

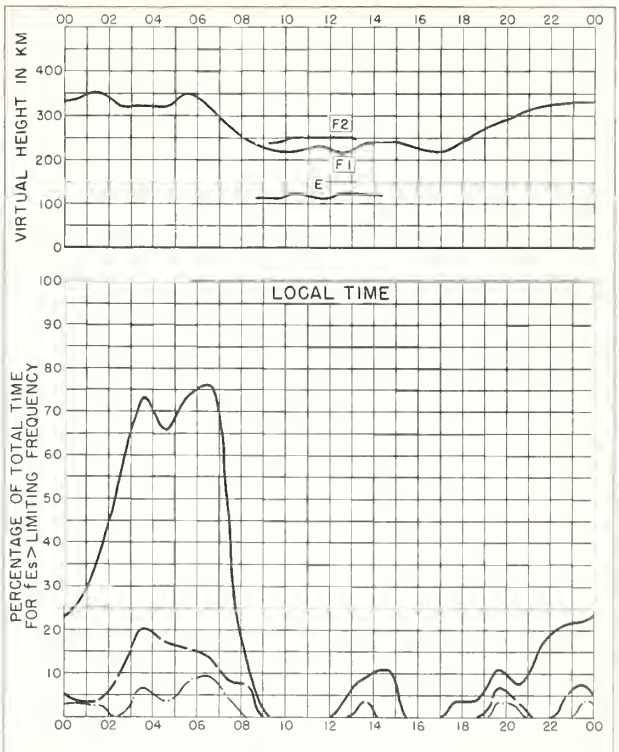



Fig. 58. WINNIPEG, CANADA DECEMBER 1952

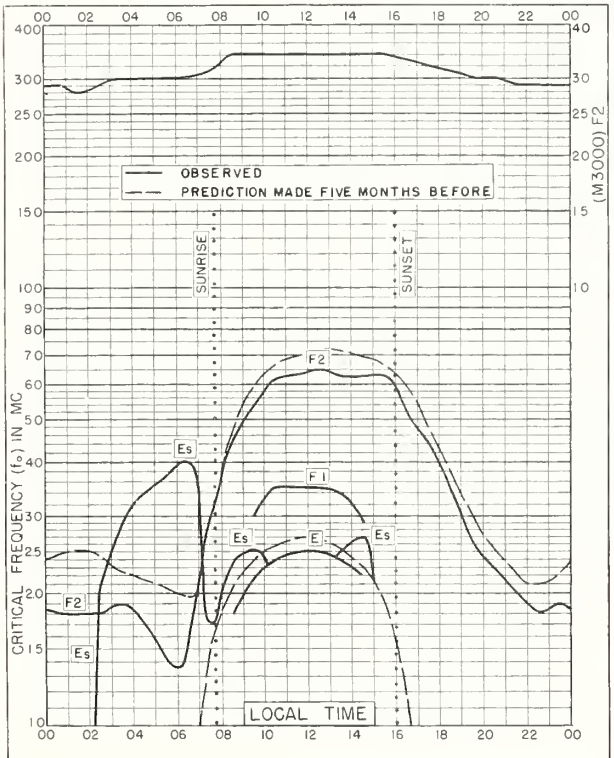



Fig. 59. ST. JOHN'S, NEWFOUNDLAND
47.6°N, 52.7°W DECEMBER 1952

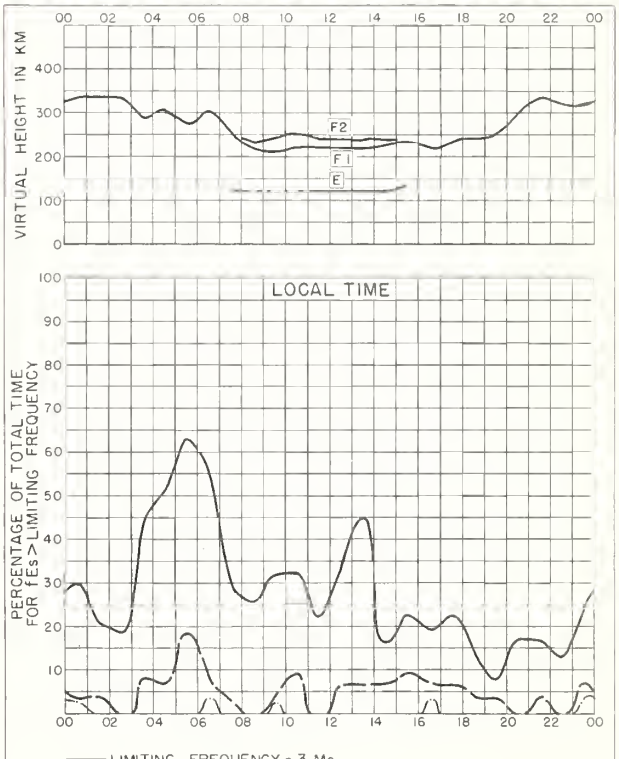



Fig. 60. ST. JOHN'S, NEWFOUNDLAND DECEMBER 1952

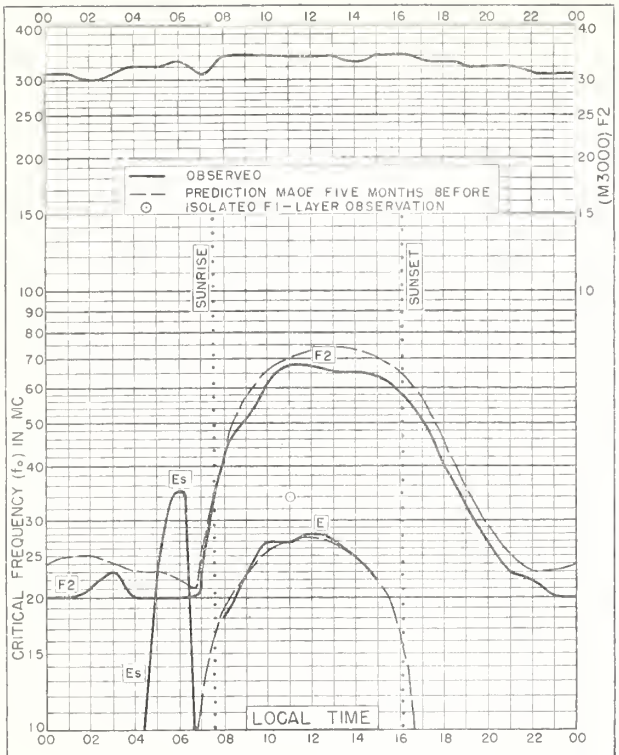



Fig. 61. OTTAWA, CANADA
45.4°N, 75.7°W DECEMBER 1952

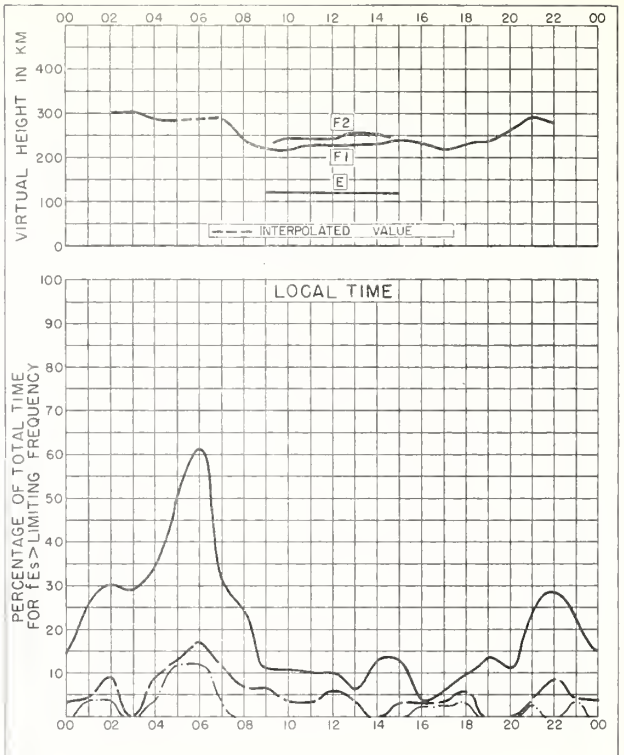



Fig. 62. OTTAWA, CANADA DECEMBER 1952

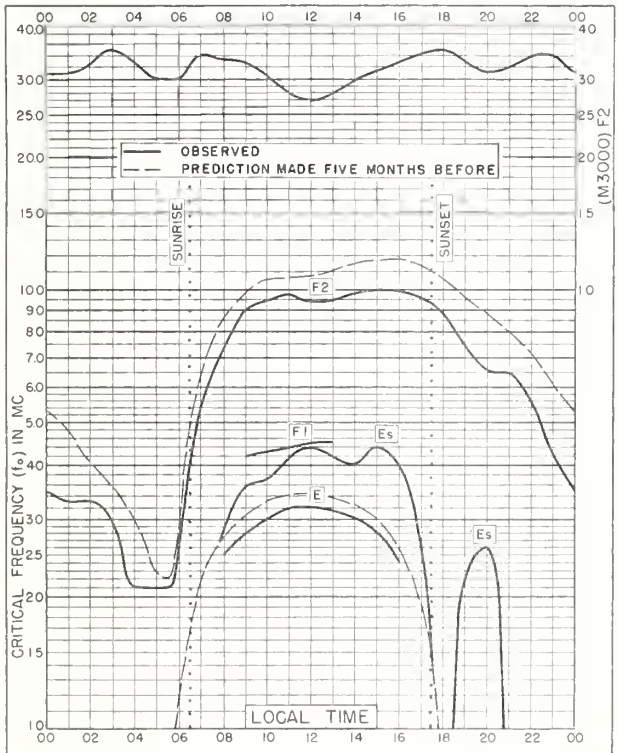



Fig. 63. BAGUIO, P. I.
16.4°N, 120.6°E DECEMBER 1952

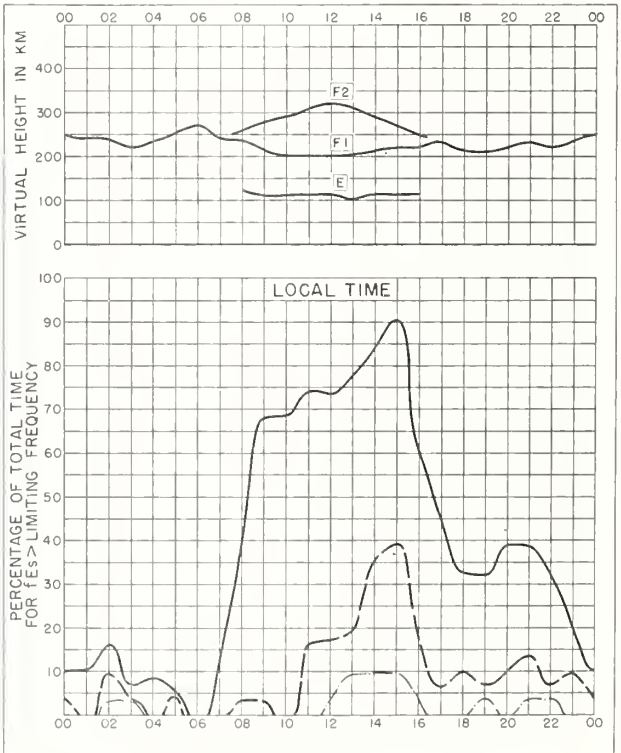



Fig. 64. BAGUIO, P. I. DECEMBER 1952

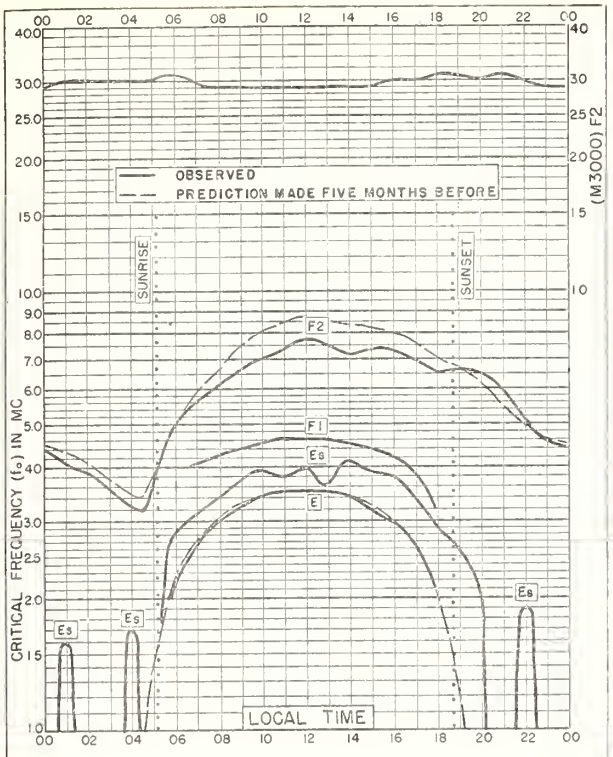



Fig. 65. JOHANNESBURG, U. OF S. AFRICA
26.2°S, 28.1°E DECEMBER 1952

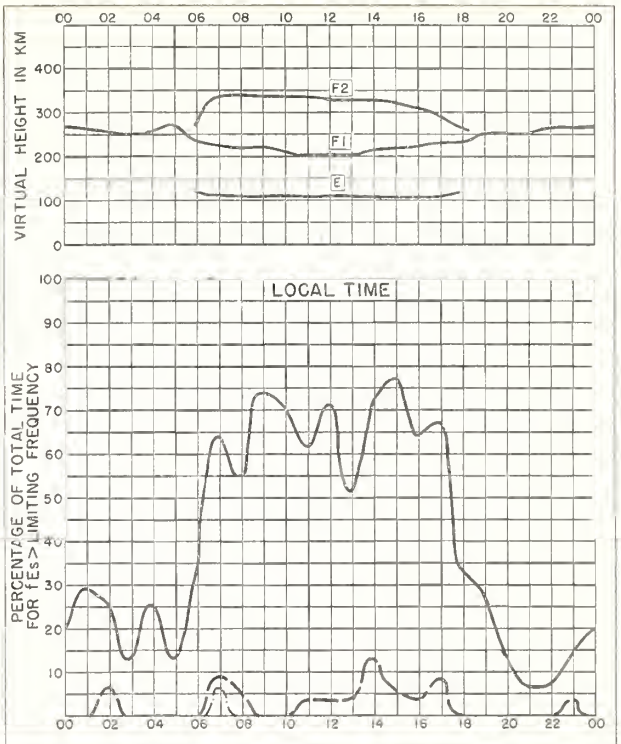



Fig. 66. JOHANNESBURG, U. OF S. AFRICA DECEMBER 1952

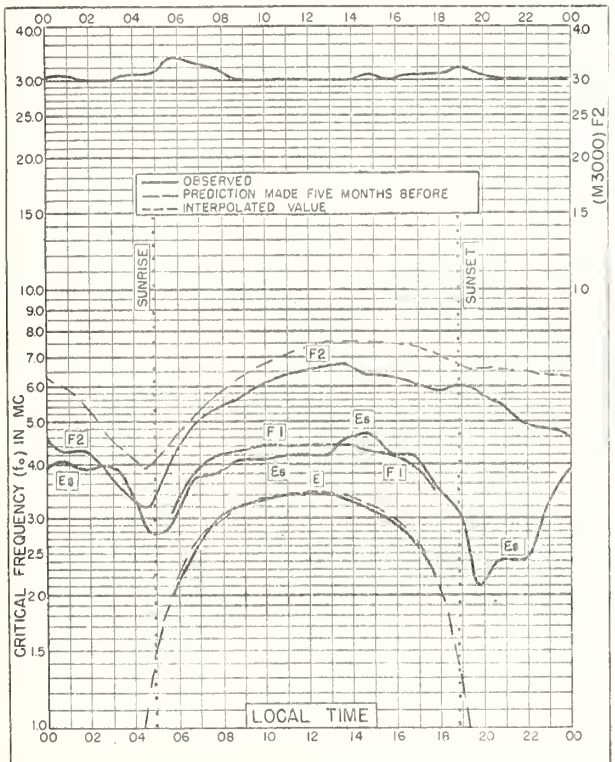



Fig. 67. WATHEROO, W. AUSTRALIA
30.3°S, 115.9°E DECEMBER 1952

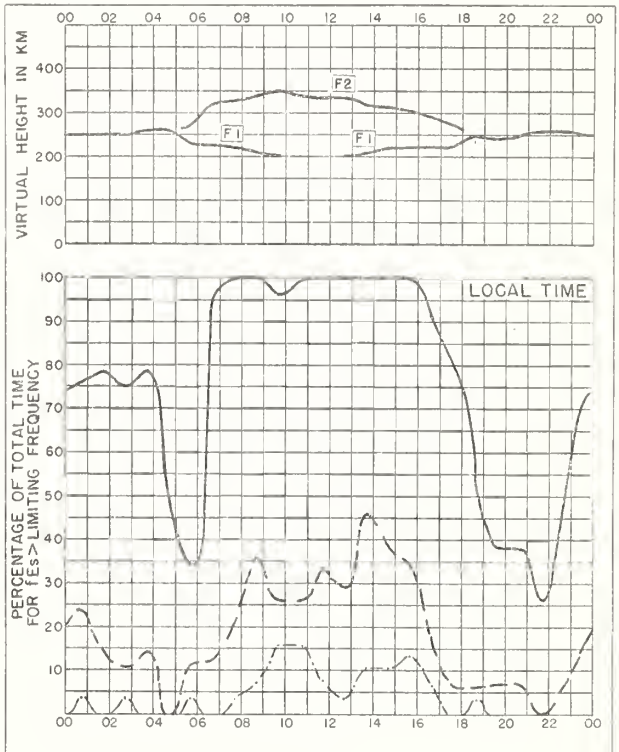



Fig. 68. WATHEROO, W. AUSTRALIA DECEMBER 1952

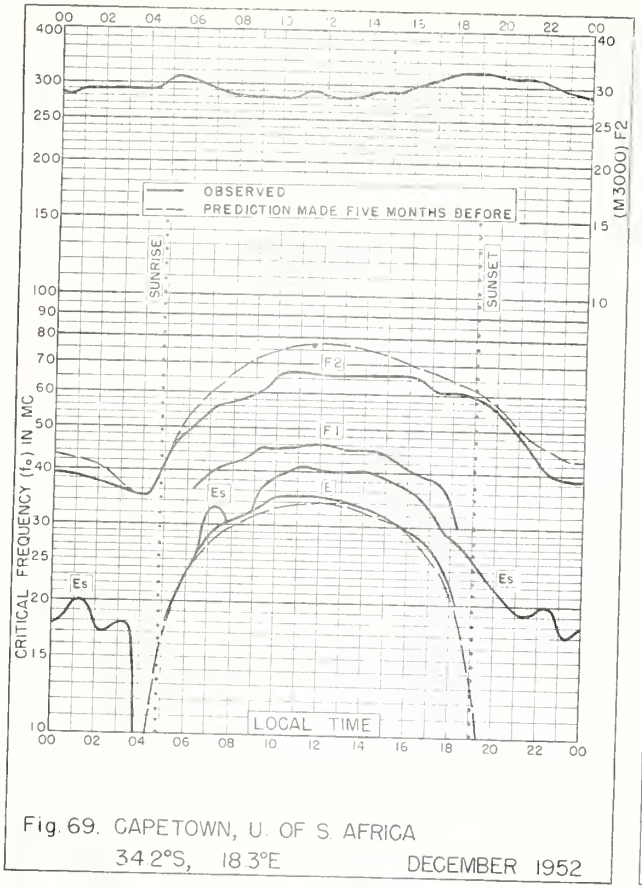



Fig. 69. CAPETOWN, U. OF S. AFRICA
34.2°S, 18.3°E DECEMBER 1952

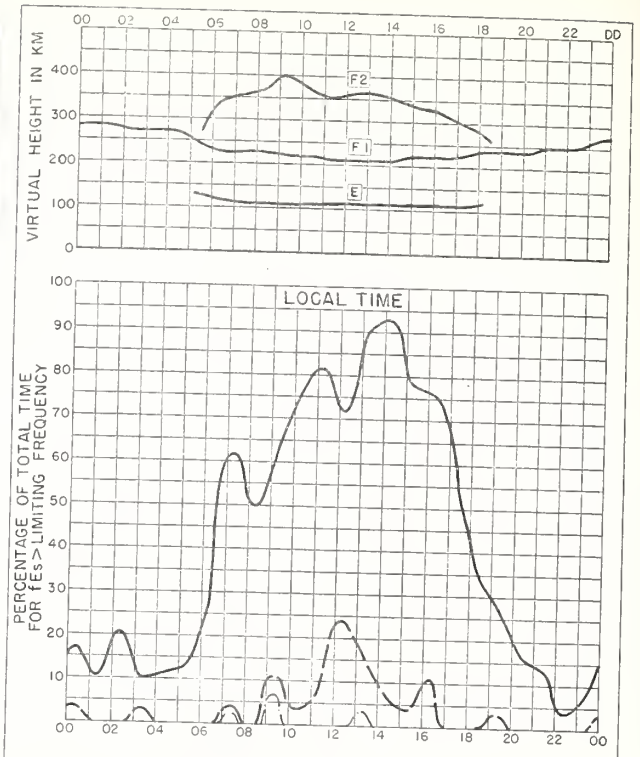



Fig. 70. CAPETOWN, U. OF S. AFRICA DECEMBER 1952

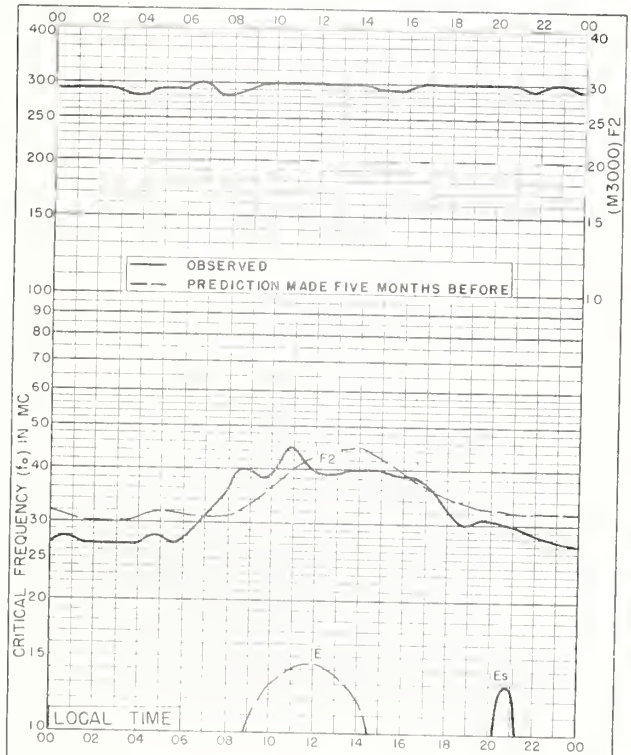



Fig 71 RESOLUTE BAY, CANADA
74.7°N, 94.9°W NOVEMBER 1952

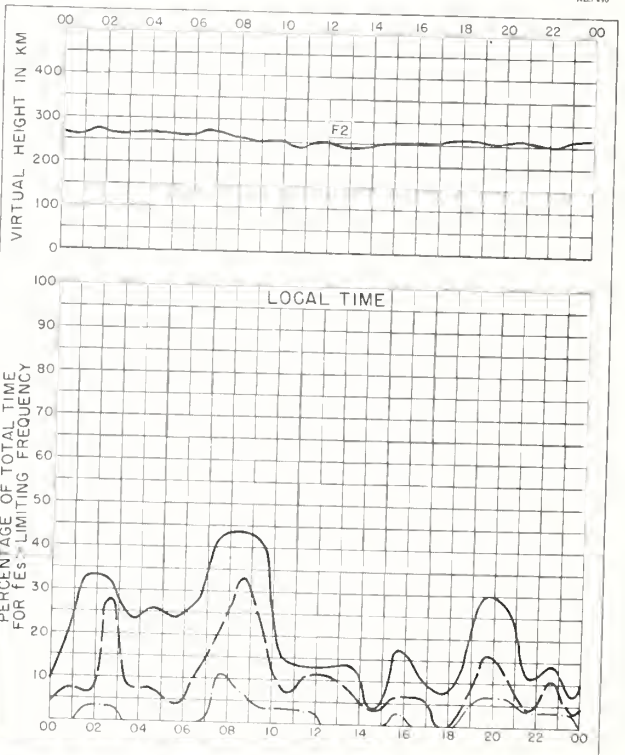



Fig 72 RESOLUTE BAY, CANADA NOVEMBER 1952

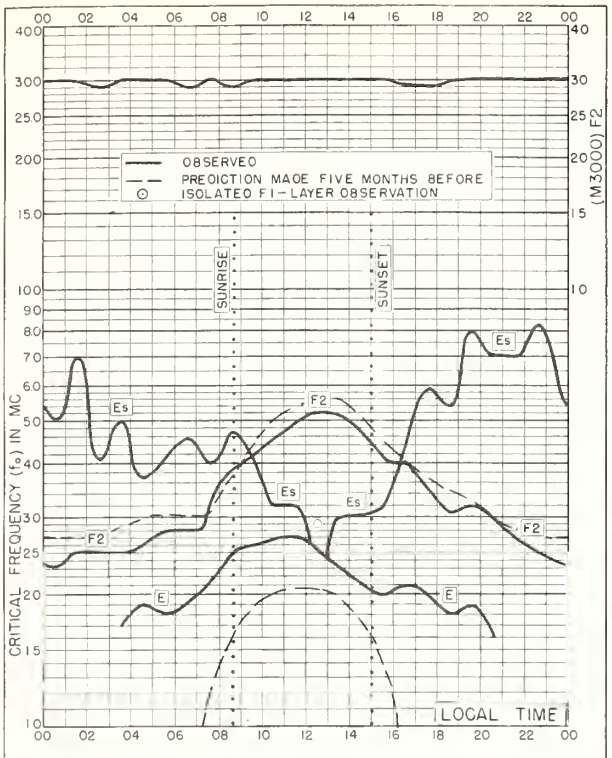



Fig. 73. BAKER LAKE, CANADA
64.3°N, 96.0°W NOVEMBER 1952

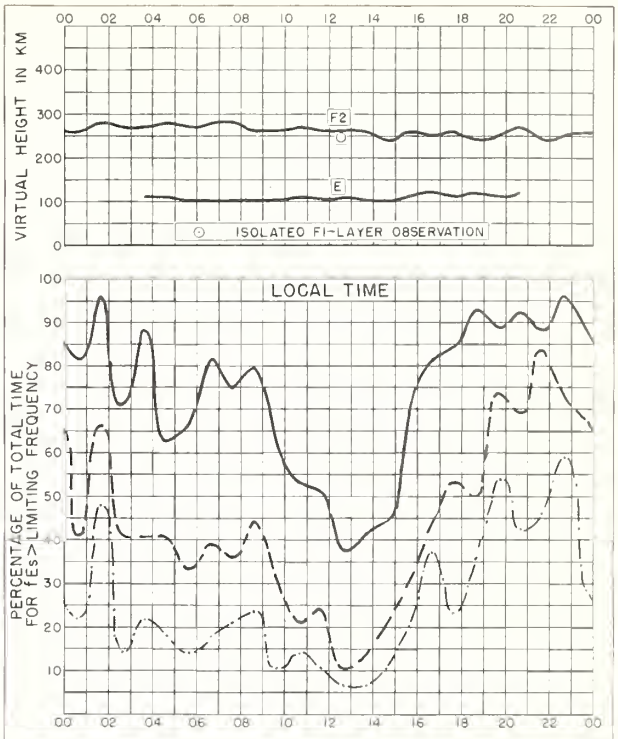



Fig. 74. BAKER LAKE, CANADA NOVEMBER 1952

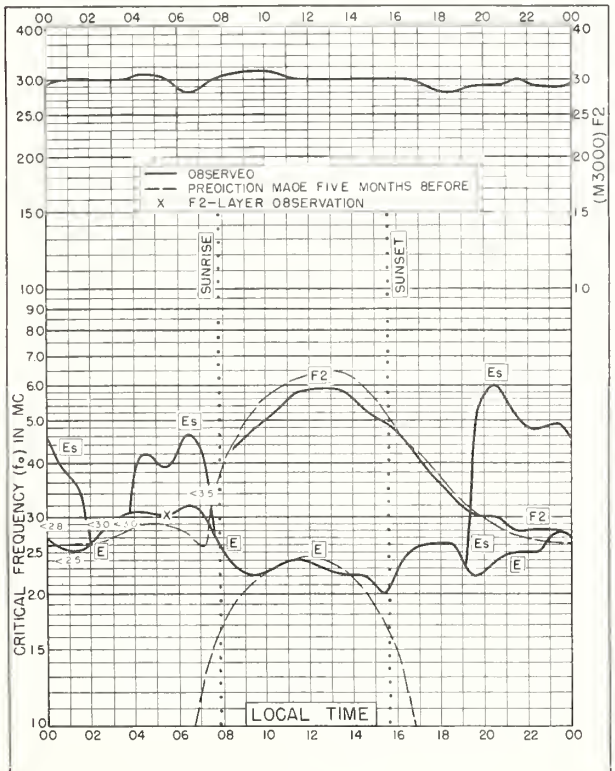



Fig. 75. FORT CHIMO, CANADA
58.1°N, 68.3° W NOVEMBER 1952

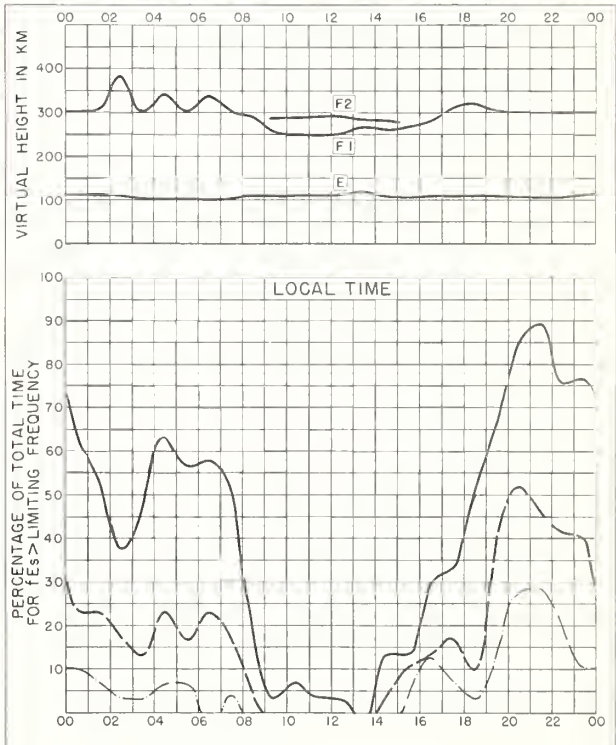



Fig. 76. FORT CHIMO, CANADA NOVEMBER 1952

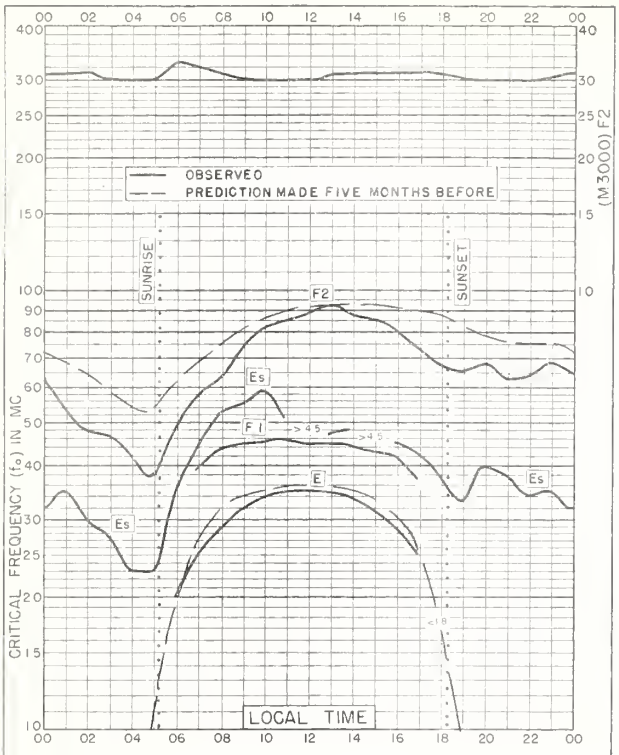



Fig. 77 TOWNSVILLE, AUSTRALIA
19.3°S, 146.8°E NOVEMBER 1952

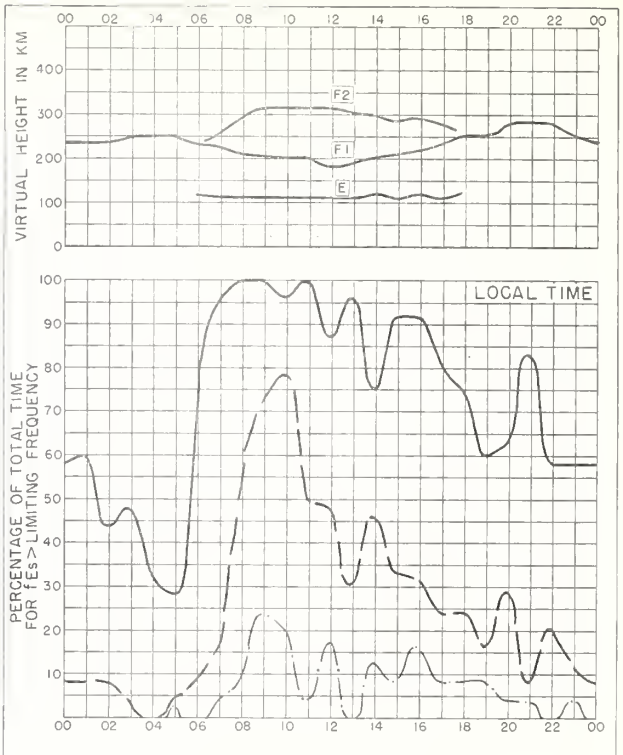



Fig. 78. TOWNSVILLE, AUSTRALIA NOVEMBER 1952

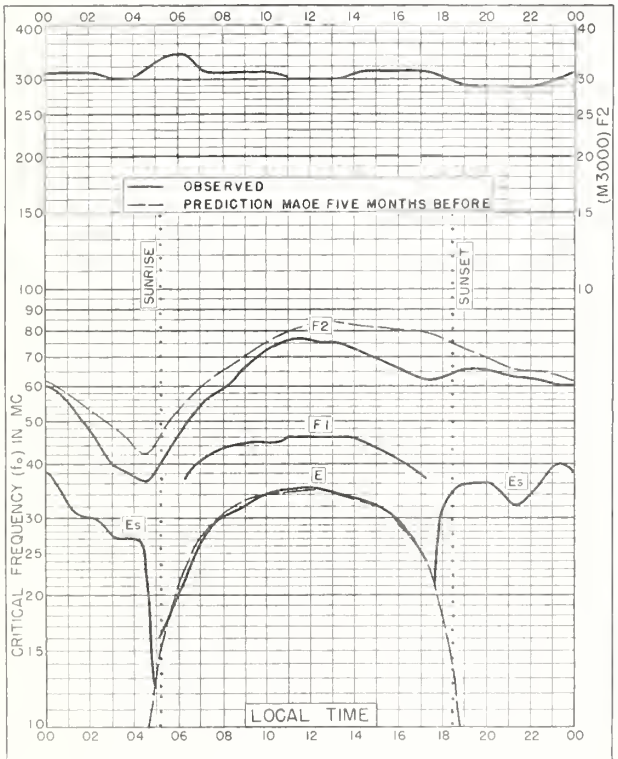



Fig. 79. BRISBANE, AUSTRALIA
27.5° S, 153.0°E NOVEMBER 1952

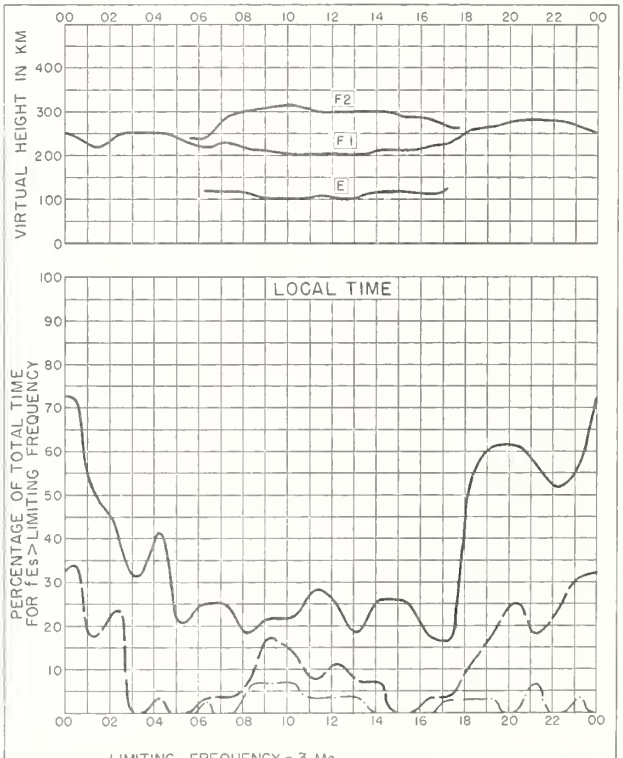



Fig. 80. BRISBANE, AUSTRALIA NOVEMBER 1952

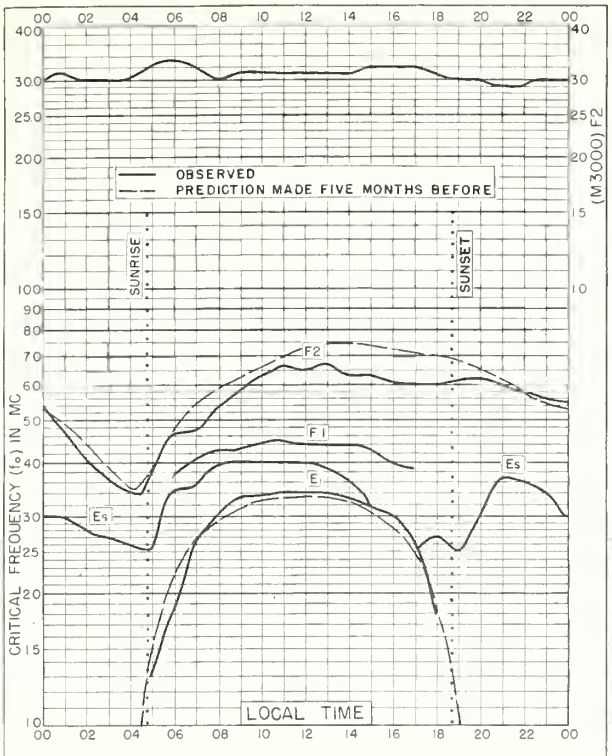



Fig. 81. CANBERRA, AUSTRALIA
35.3°S, 149.0°E NOVEMBER 1952

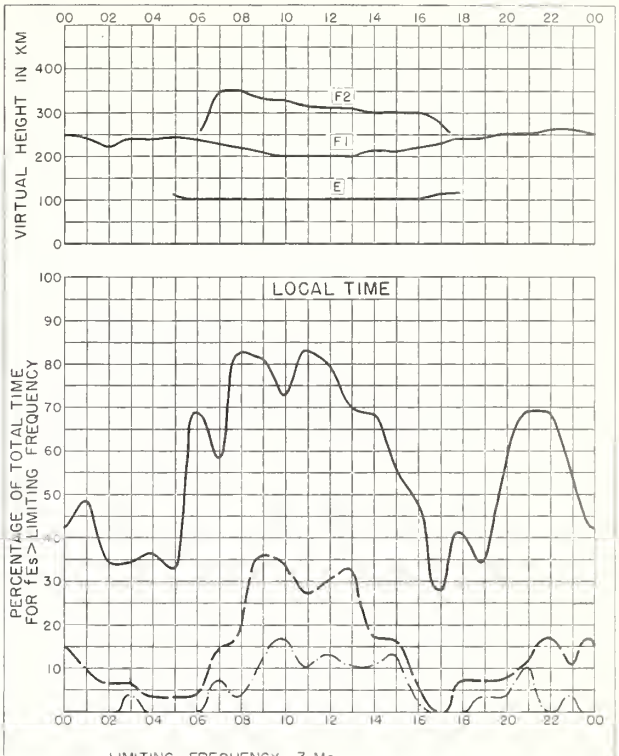



Fig. 82. CANBERRA, AUSTRALIA NOVEMBER 1952

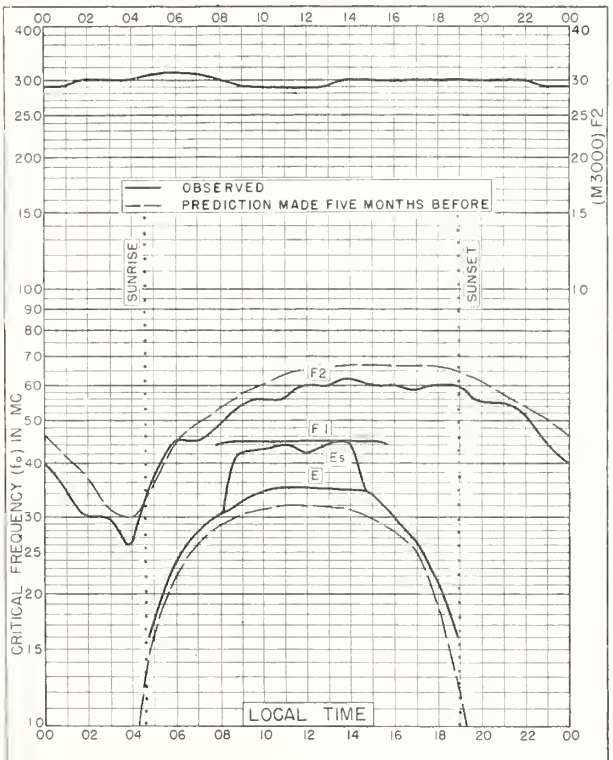



Fig. 83. HOBART, TASMANIA
42.9°S, 147.3°E NOVEMBER 1952

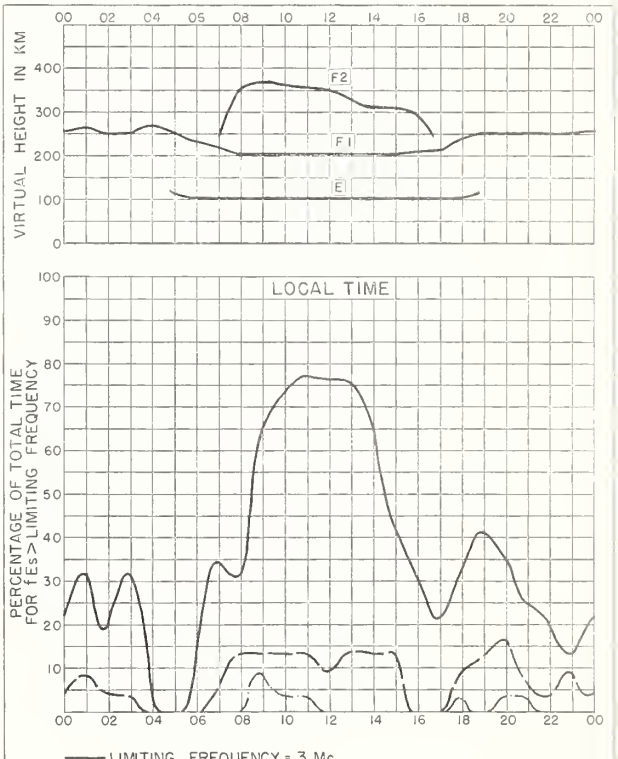



Fig. 84. HOBART, TASMANIA NOVEMBER 1952

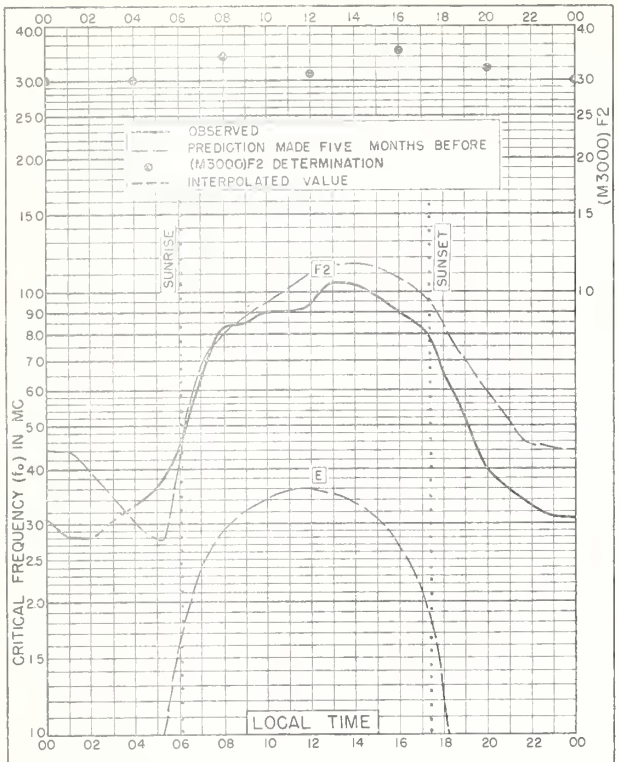



Fig. 85. DELHI, INDIA
28.6°N, 77.1°E OCTOBER 1952

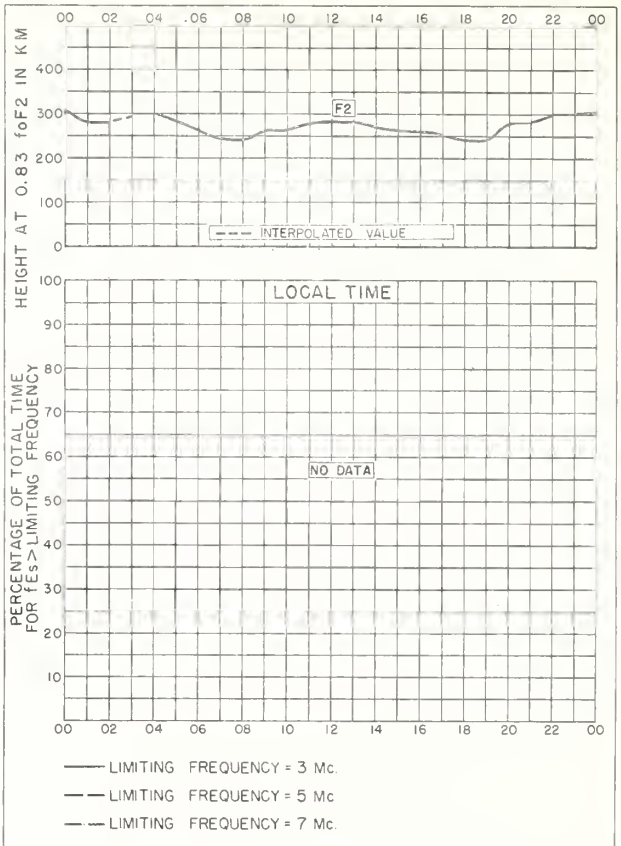



Fig. 86. DELHI, INDIA OCTOBER 1952

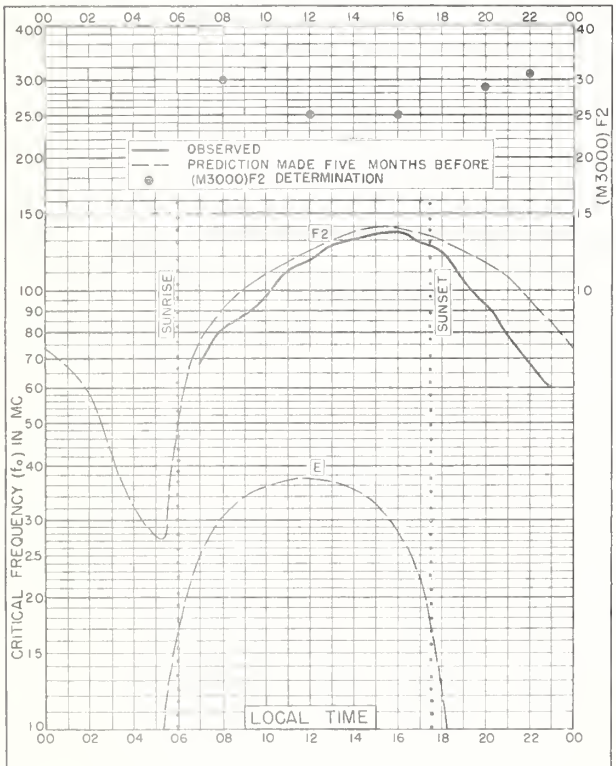



Fig. 87. BOMBAY, INDIA
19.0°N, 73.0°E OCTOBER 1952

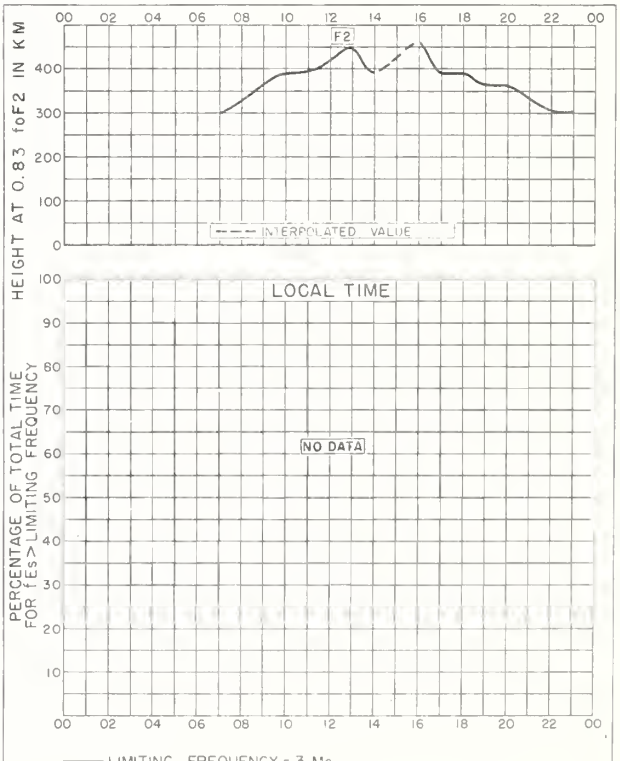



Fig. 88. BOMBAY, INDIA OCTOBER 1952

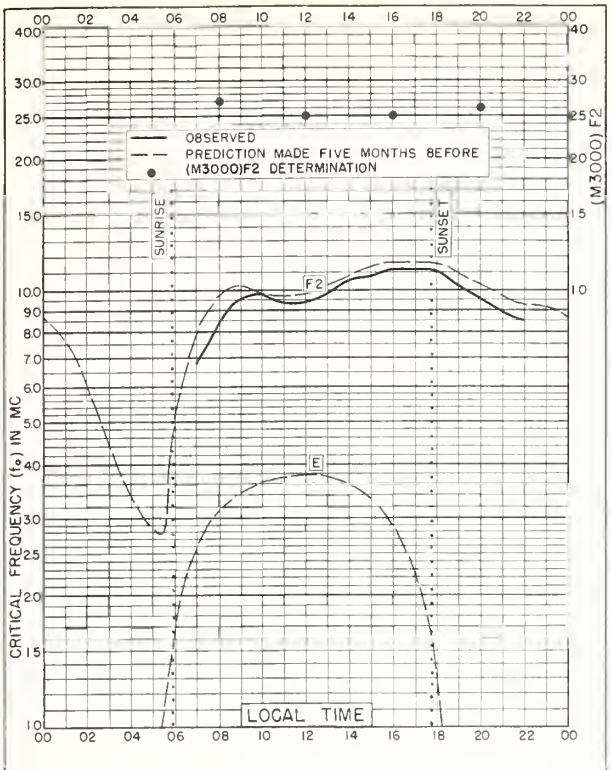



Fig. 89. MADRAS, INDIA
13.0°N, 80.2°E OCTOBER 1952

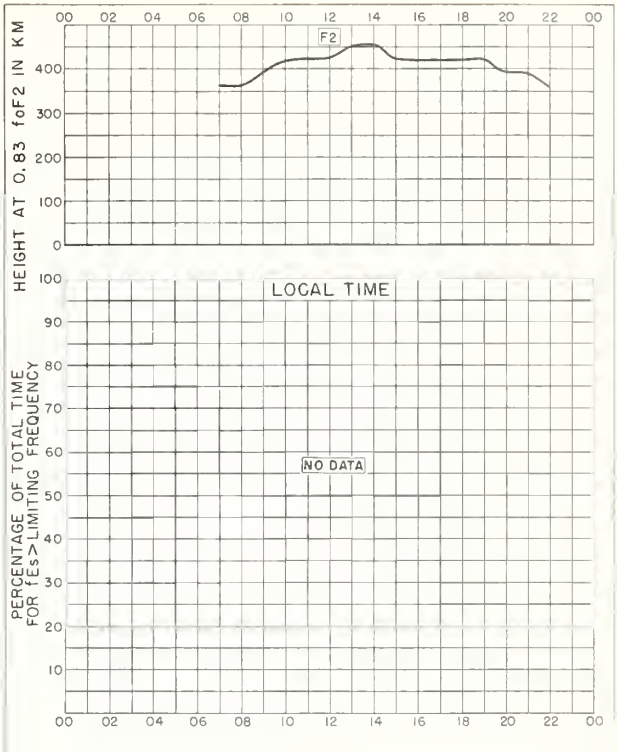



Fig. 90. MADRAS, INDIA OCTOBER 1952

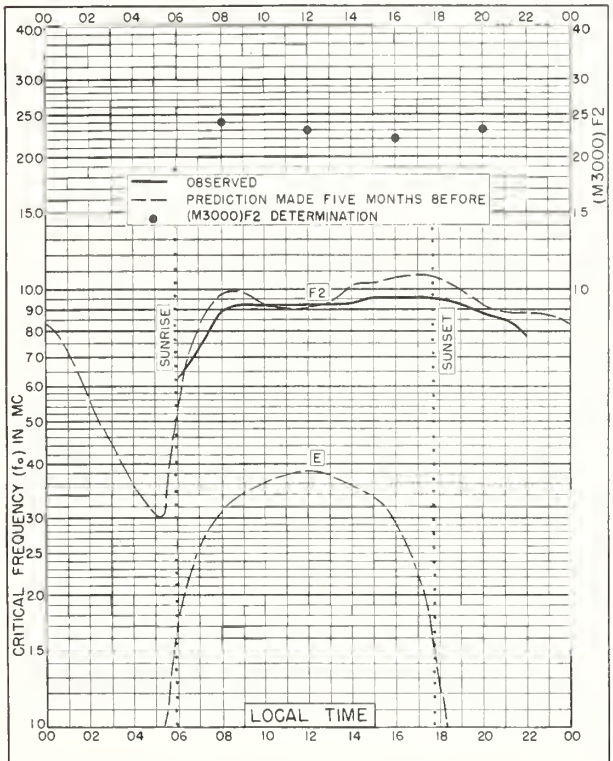



Fig. 91. TIRUCHY, INDIA
10.8°N, 78.8°E OCTOBER 1952

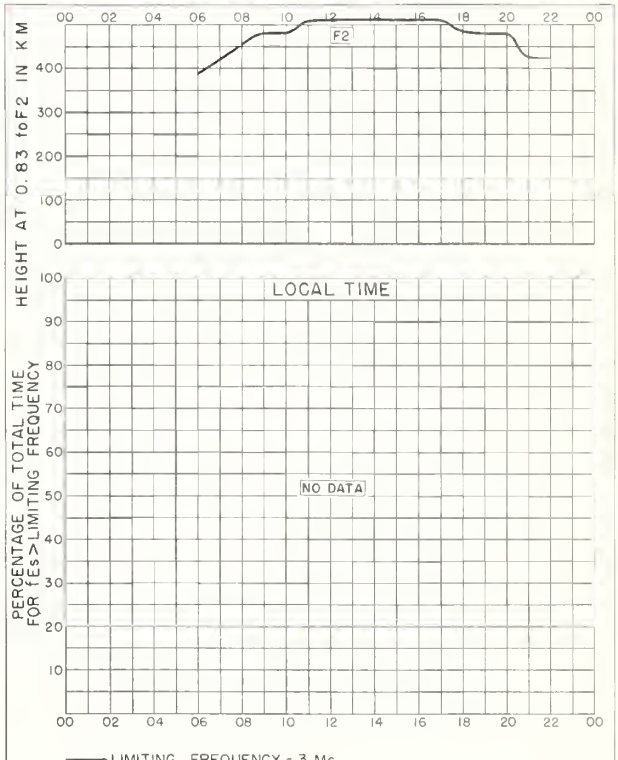



Fig. 92. TIRUCHY, INDIA OCTOBER 1952

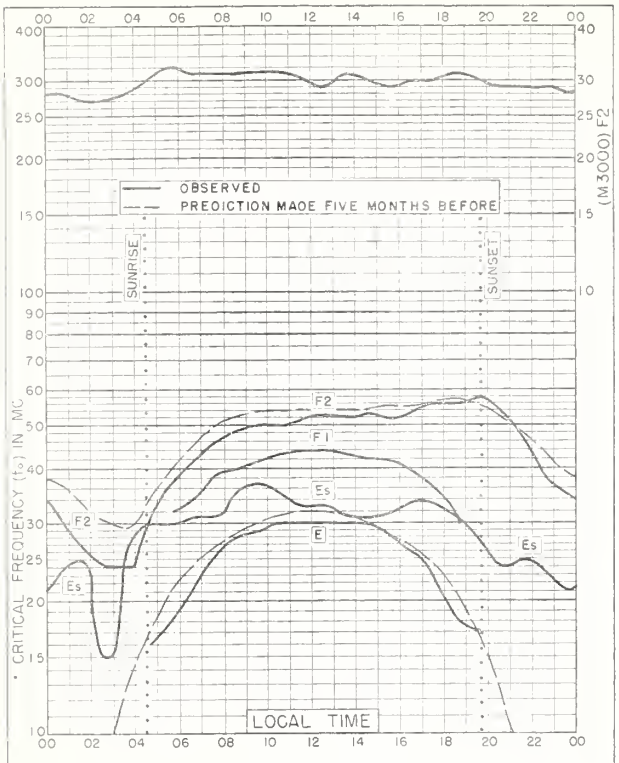



Fig 93. INVERNESS, SCOTLAND
57.4°N, 4.2°W AUGUST 1952

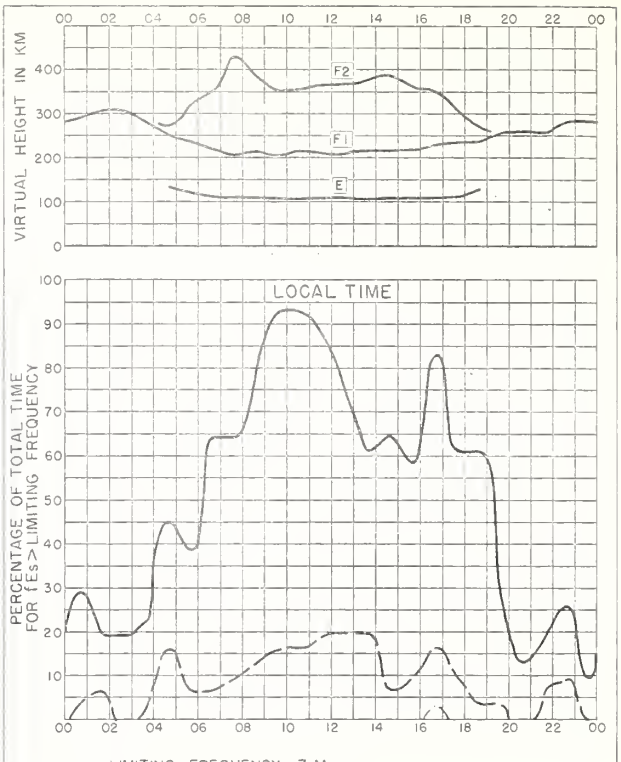



Fig 94. INVERNESS, SCOTLAND AUGUST 1952

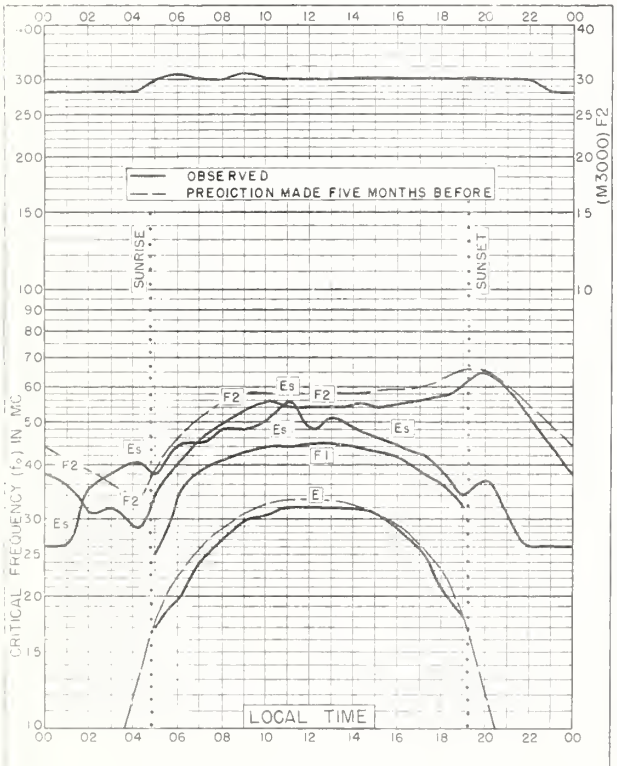



Fig. 95. SLOUGH, ENGLAND
51.5°N, 0.6°W AUGUST 1952

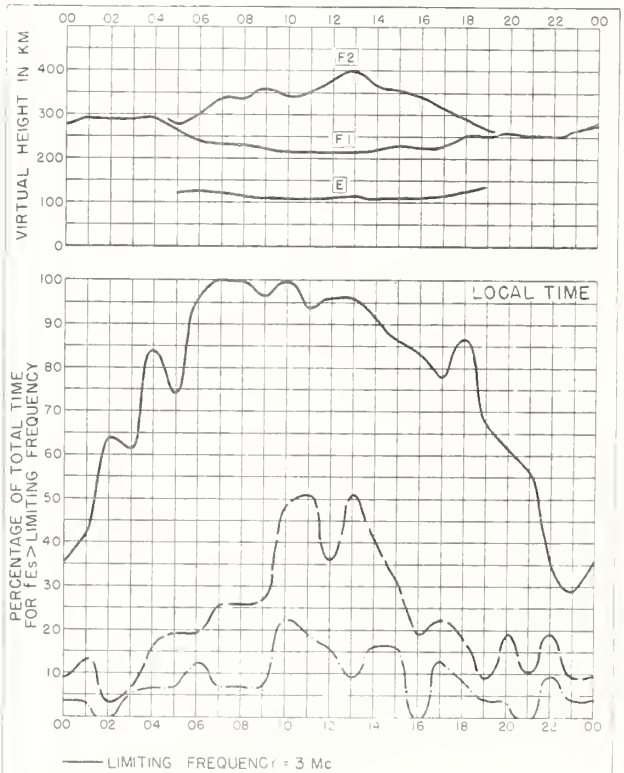



Fig. 96. SLOUGH, ENGLAND AUGUST 1952

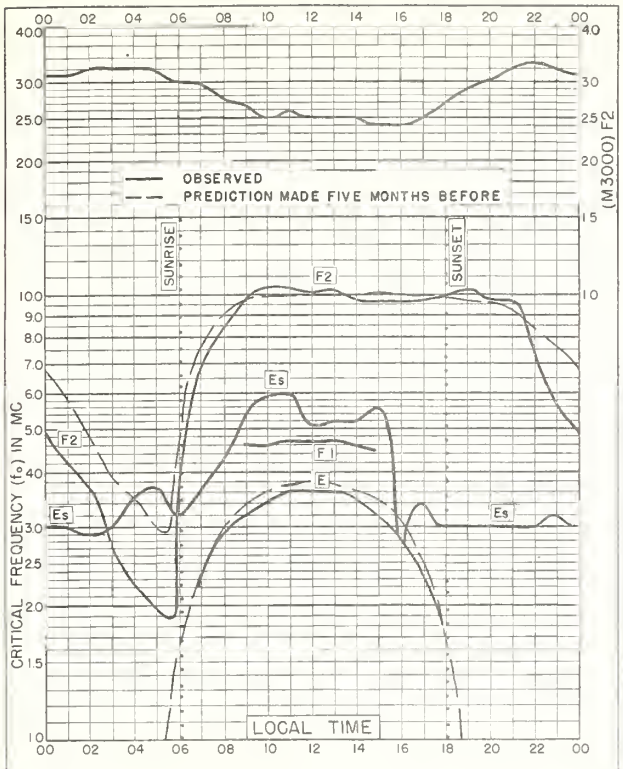
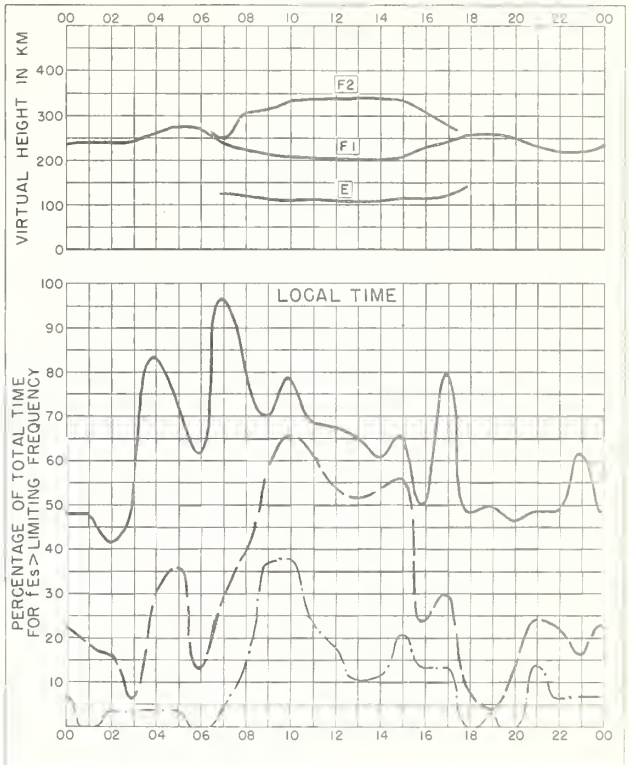



Fig. 97. SINGAPORE, BRITISH MALAYA
1.3°N, 103.8°E AUGUST 1952




AUGUST 1952
Fig. 98. SINGAPORE, BRITISH MALAYA

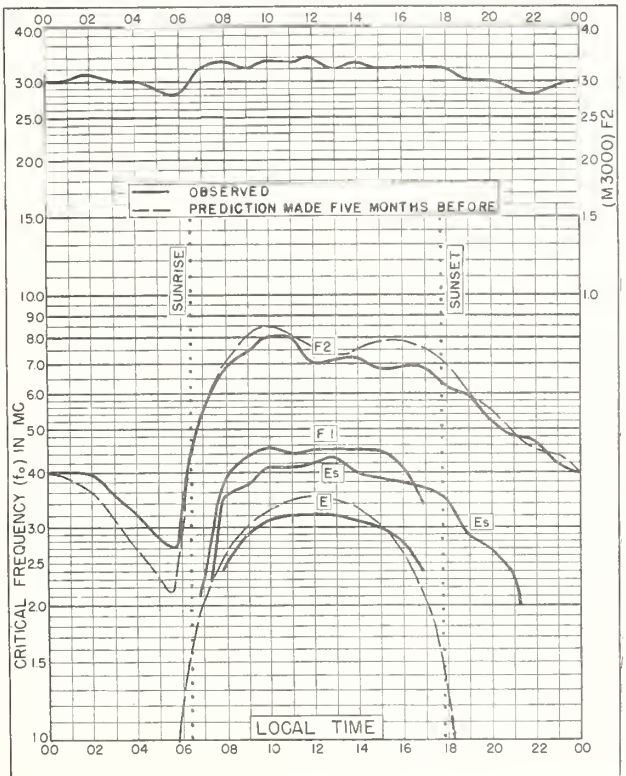



Fig. 99. RAROTONGA I.
21.3°S, 159.8°W AUGUST 1952

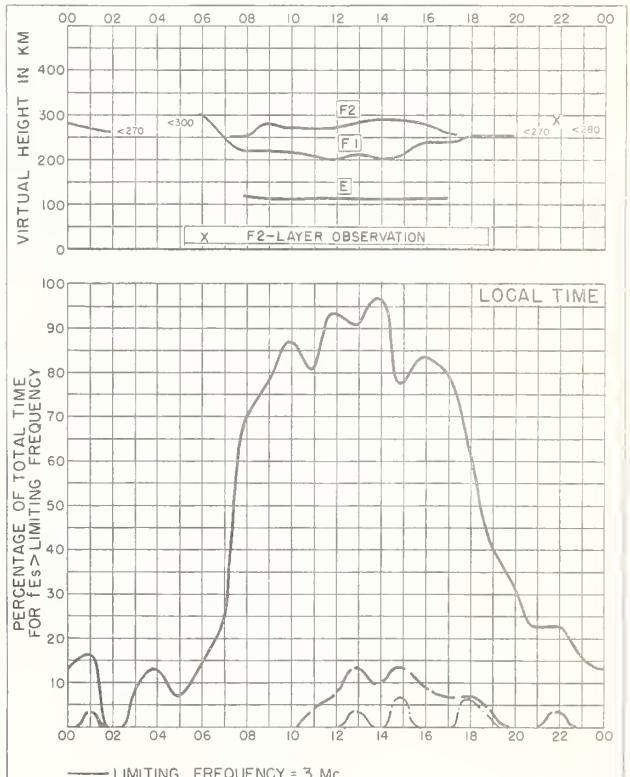



Fig. 100. RAROTONGA I. AUGUST 1952

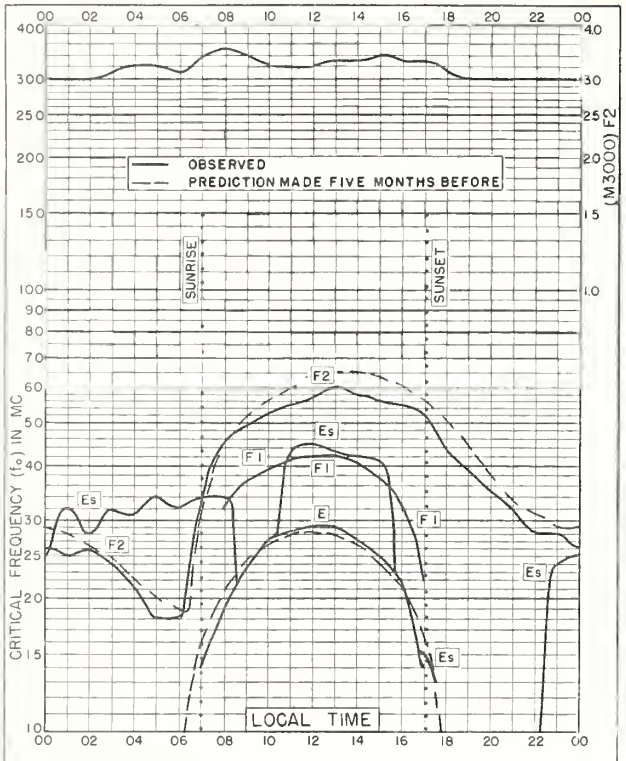



Fig. 101. CHRISTCHURCH, N.Z.
43.6° S, 172.7°E AUGUST 1952

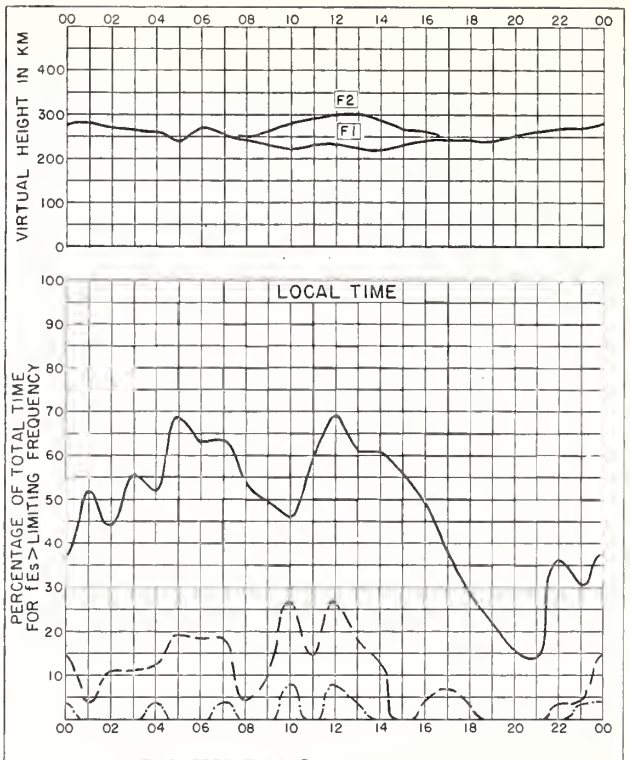



Fig. 102. CHRISTCHURCH, N.Z. AUGUST 1952

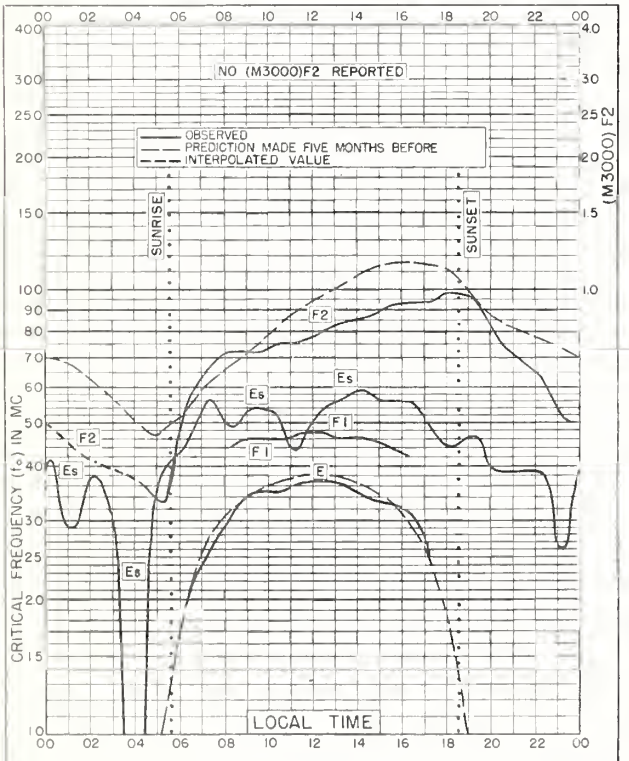



Fig. 103. KHARTOUM, SUDAN
15.6°N, 32.6°E JULY 1952

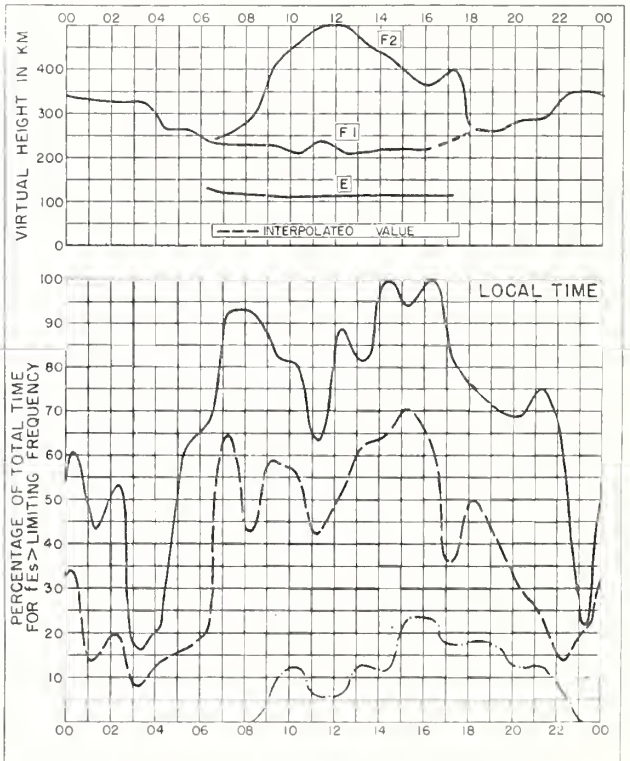



Fig. 104. KHARTOUM, SUDAN JULY 1952

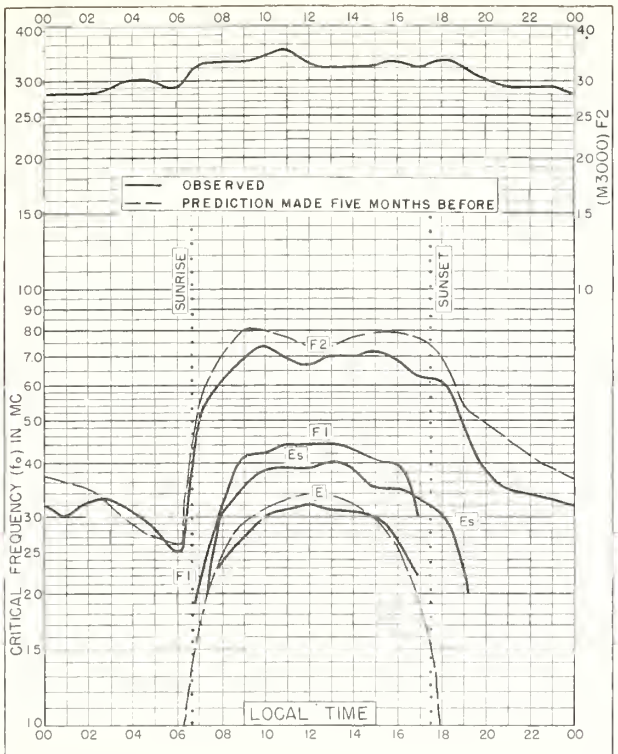



Fig. 105. RAROTONGA I.
21.3° S, 159.8° W JULY 1952

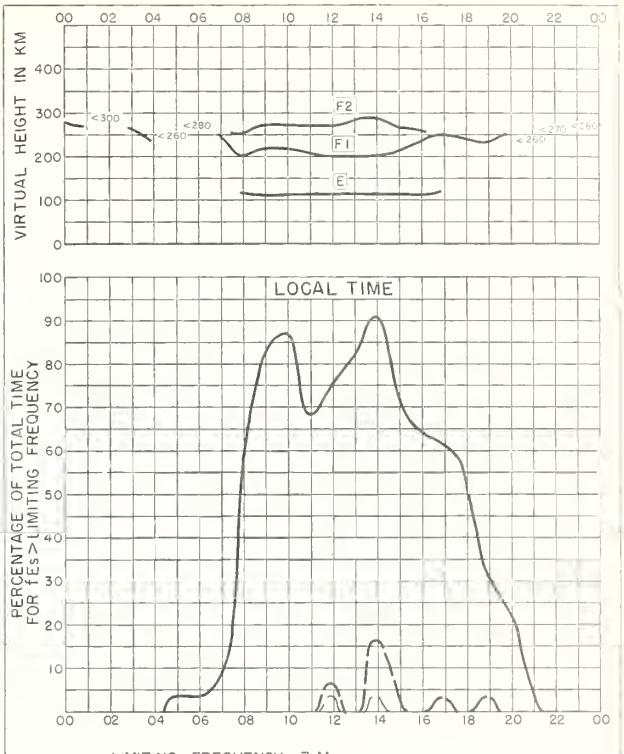



Fig 106. RAROTONGA I. JULY 1952

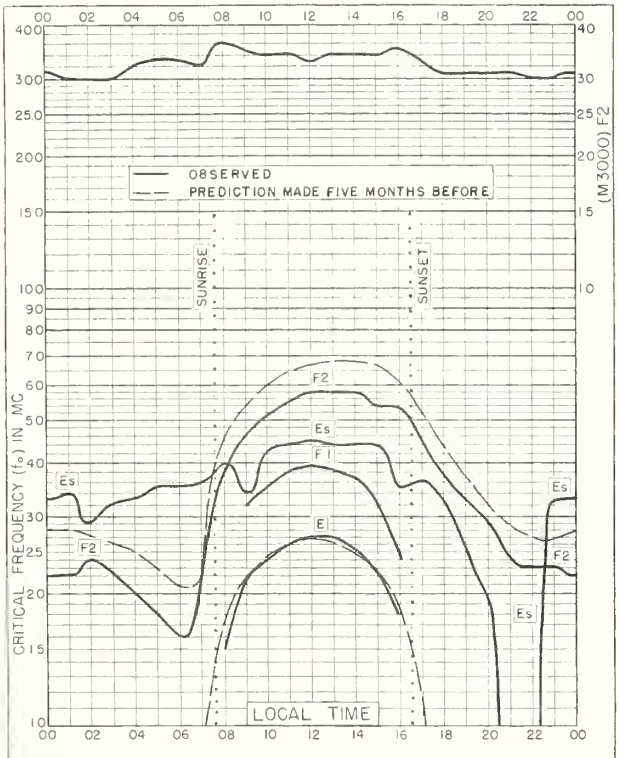



Fig 107. CHRISTCHURCH, N. Z.
43.6° S, 172.7° E JULY 1952

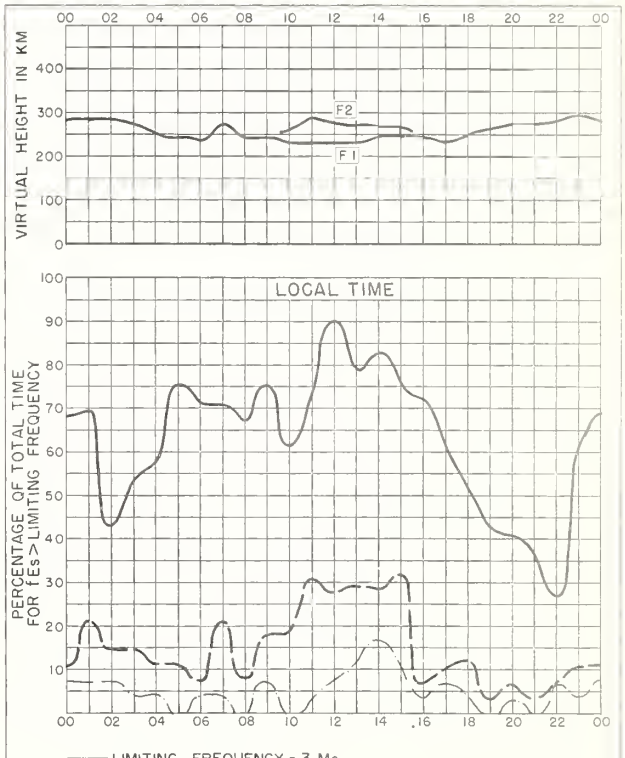



Fig. 108. CHRISTCHURCH, N. Z. JULY 1952

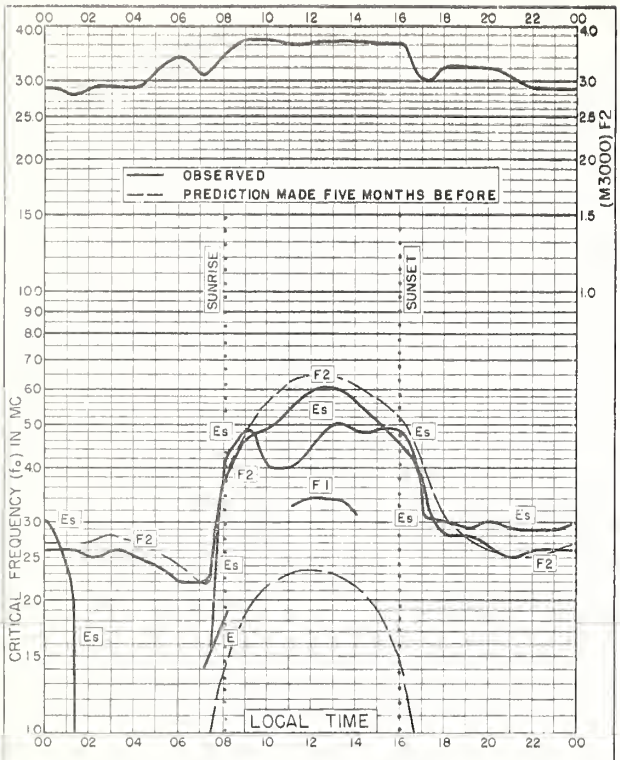



Fig. 109. FALKLAND IS.
51.7°S, 57.8°W JULY 1952

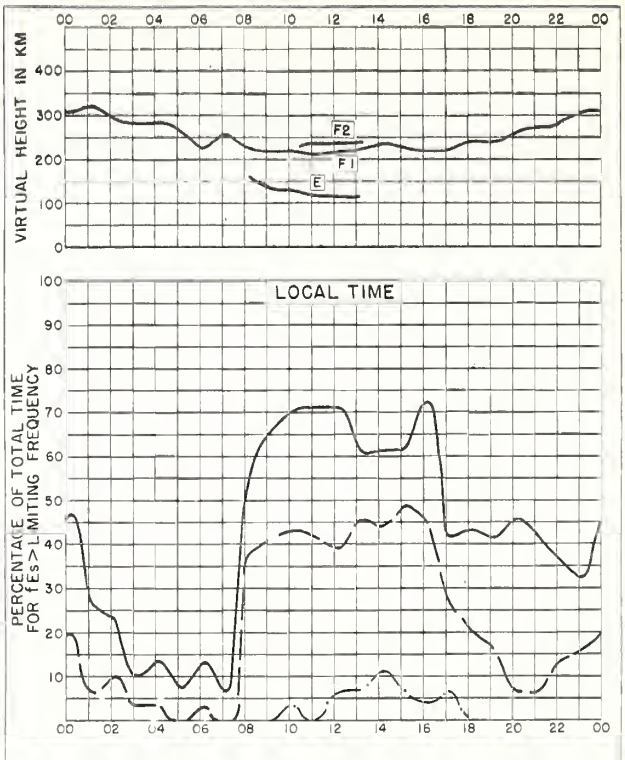



Fig. 110. FALKLAND IS. JULY 1952

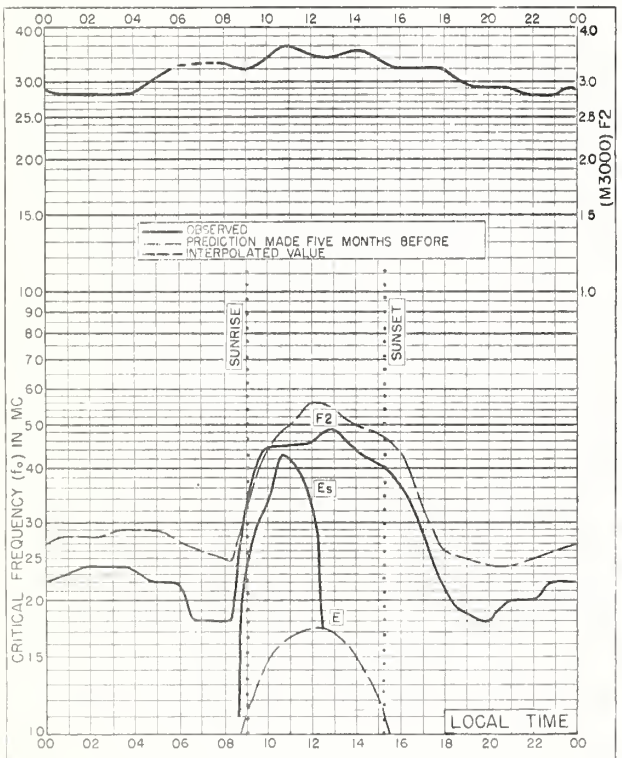



Fig. 111. PORT LOCKROY
64.8°S, 63.5°W JULY 1952

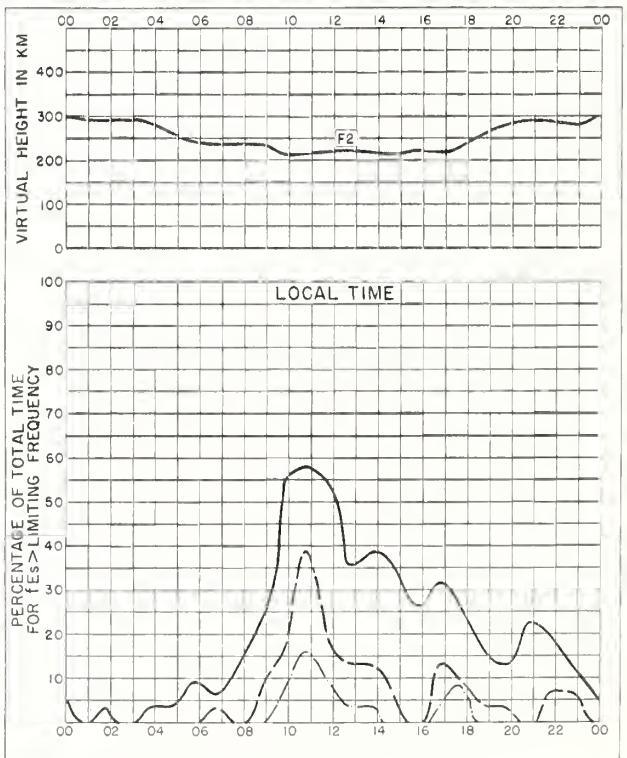



Fig. 112. PORT LOCKROY JULY 1952

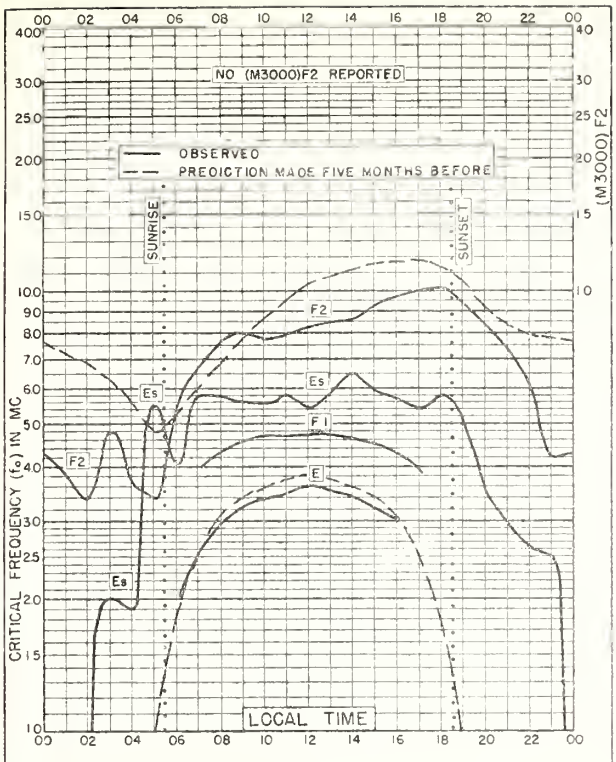



Fig. 113. KHARTOUM, SUDAN
15.6°N, 32.6°E JUNE 1952

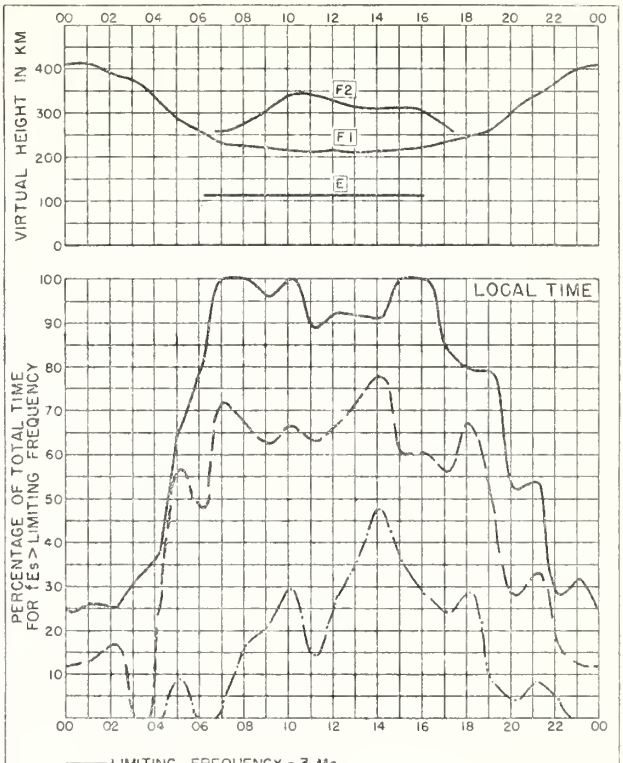



Fig. 114. KHARTOUM, SUDAN JUNE 1952

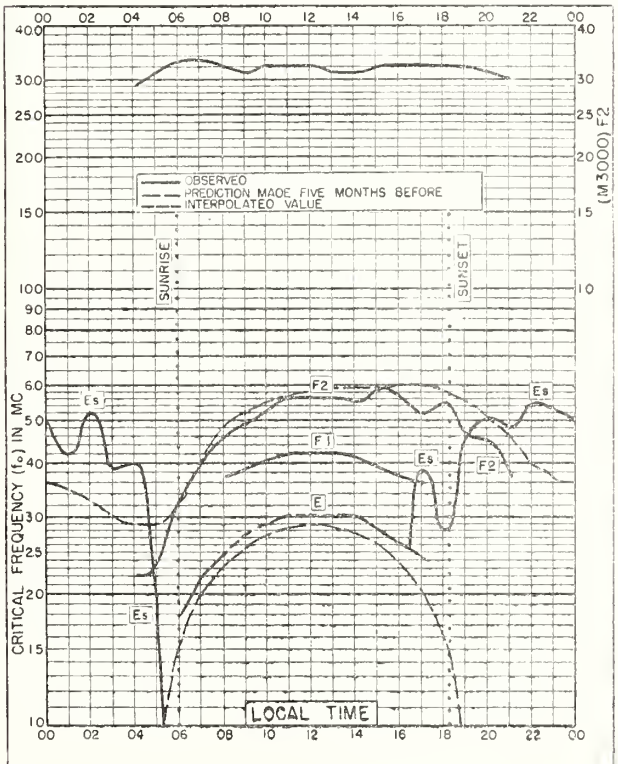



Fig. 115. MACQUARIE I.
54.5° S, 159.0°E MARCH 1952

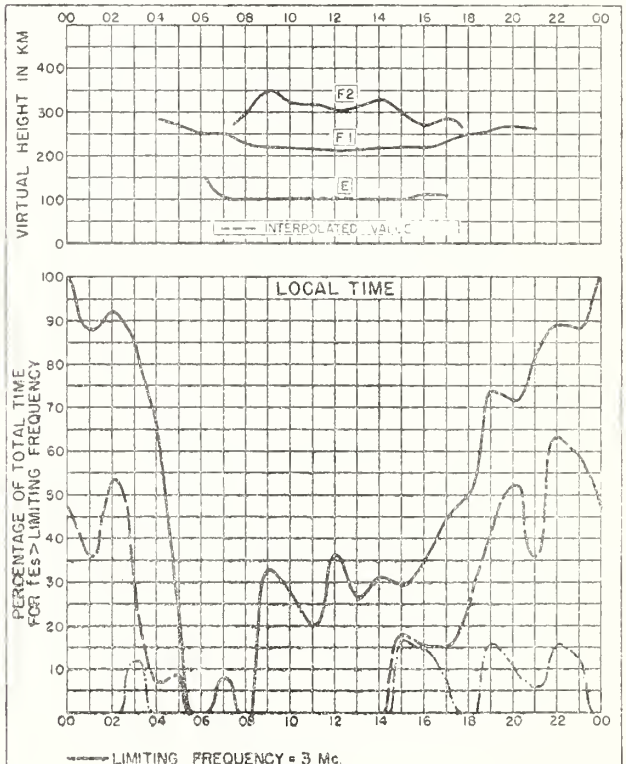



Fig. 116 MACQUARIE I. MARCH 1952

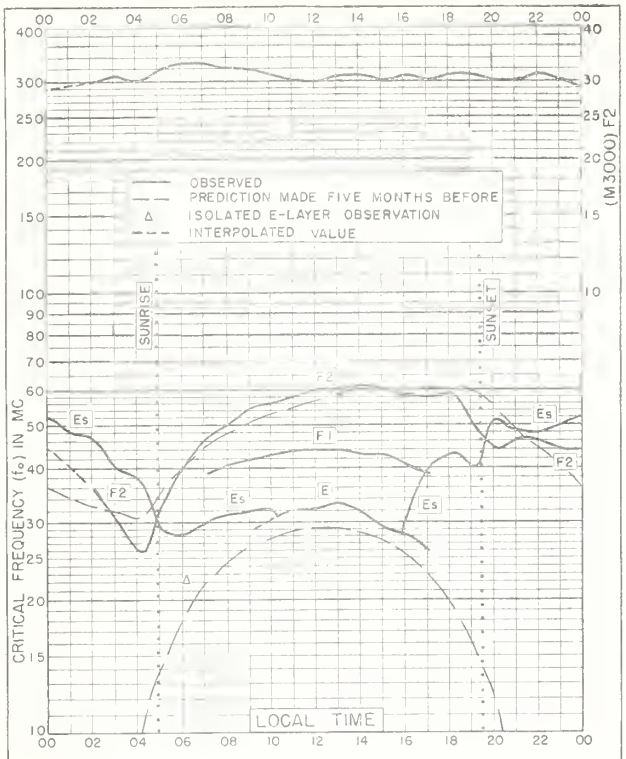



Fig.117. MACQUARIE I.
54.5°S, 159.0°E FEBRUARY 1952

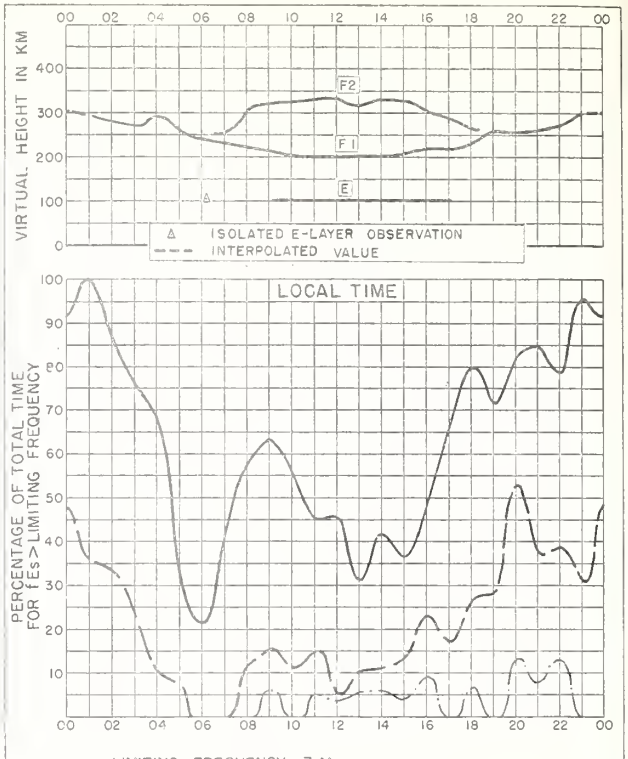



Fig. 118. MACQUARIE I. FEBRUARY 1952

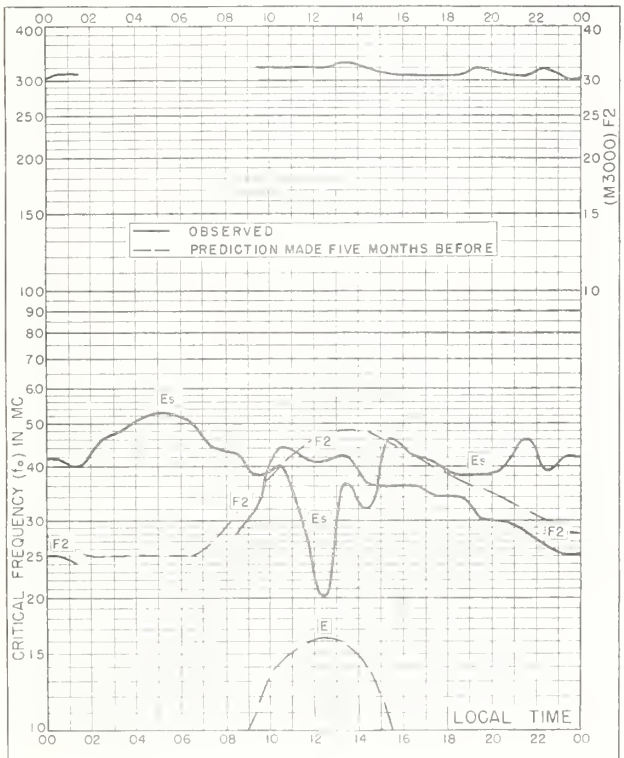



Fig.119. GODHAVN, GREENLAND
69.2°N, 53.5°W JANUARY 1952

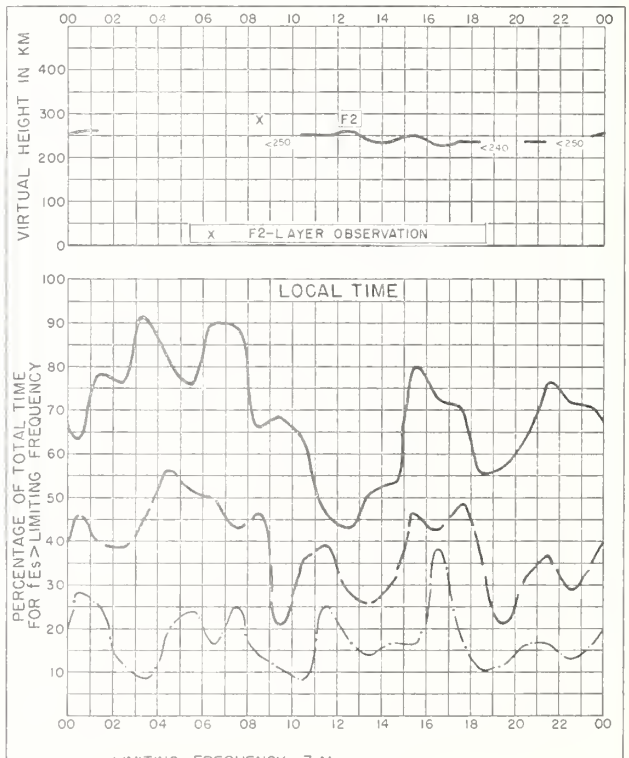



Fig.120. GODHAVN, GREENLAND JANUARY 1952

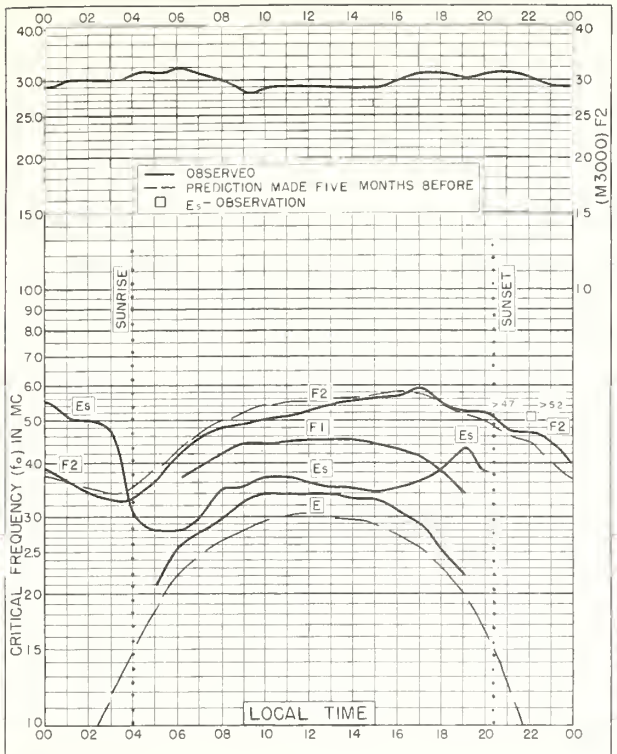



Fig. 121. MACQUARIE I.
54.5°S, 159.0°E JANUARY 1952

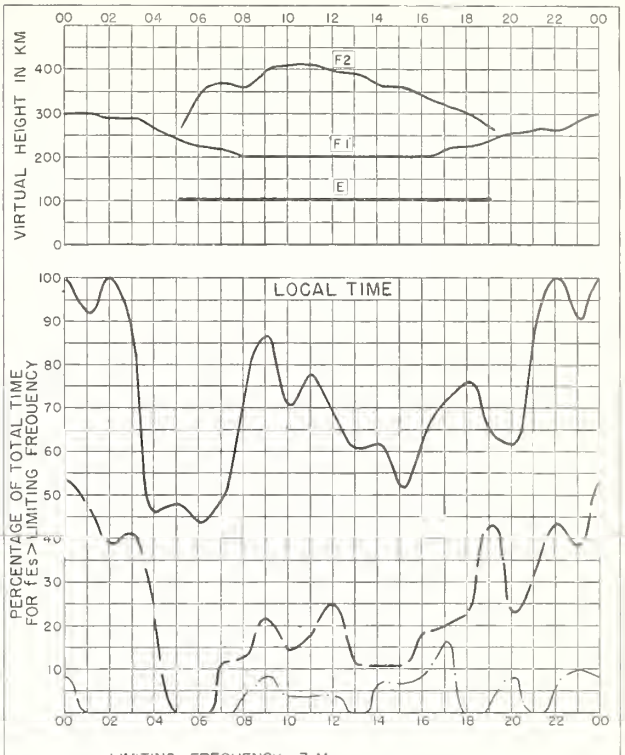



Fig. 122. MACQUARIE I. JANUARY 1952

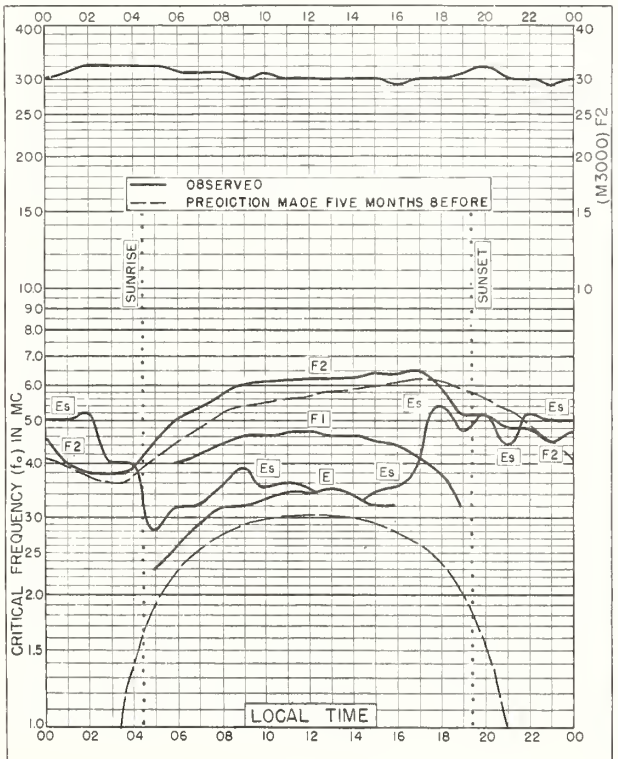



Fig. 123. MACQUARIE I.
54.5°S, 159.0°E DECEMBER 1951

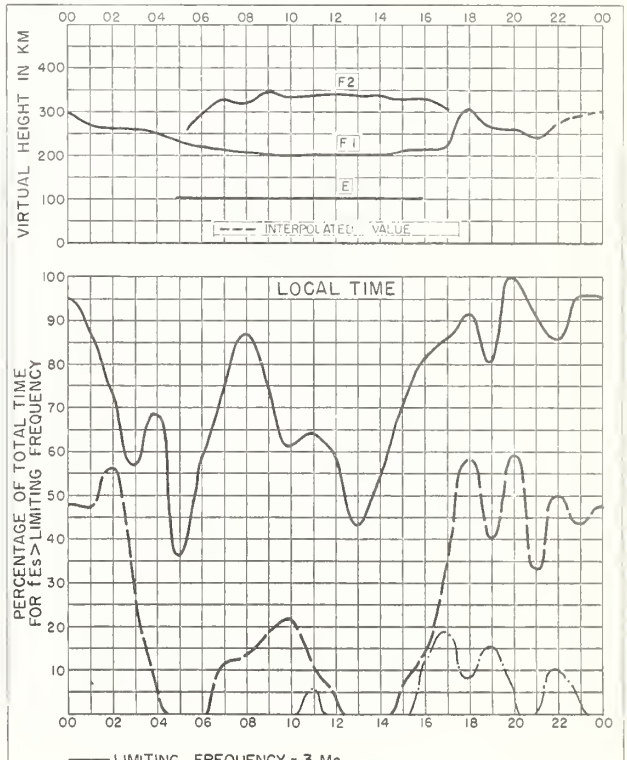



Fig. 124. MACQUARIE I. DECEMBER 1951

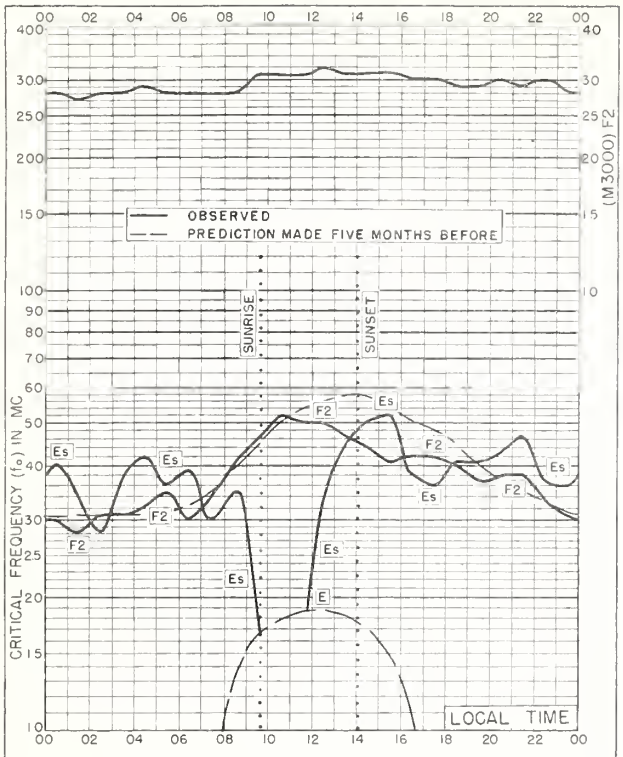



Fig.125. GODHAVN, GREENLAND
69.2°N, 53.5°W NOVEMBER 1951

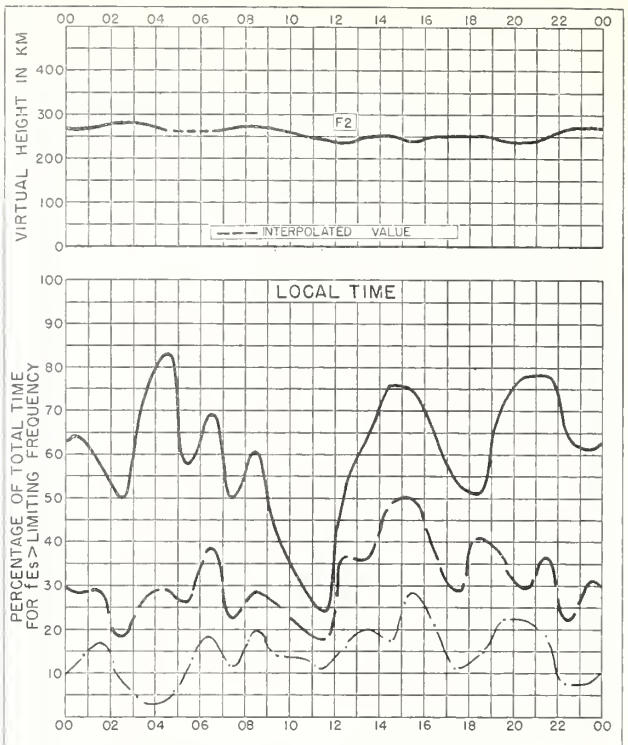



Fig.126. GODHAVN, GREENLAND NOVEMBER 1951

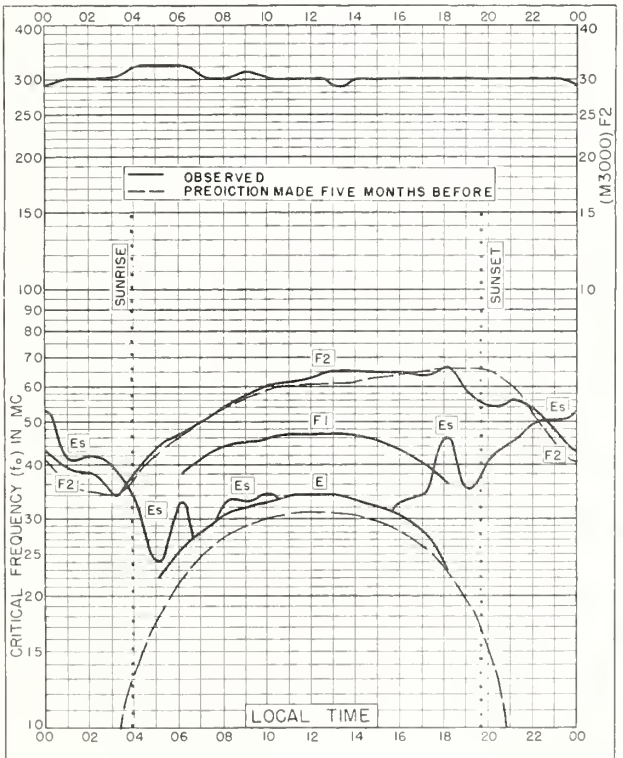



Fig 127. MACQUARIE I.
54.5°S, 159.0°E NOVEMBER 1951

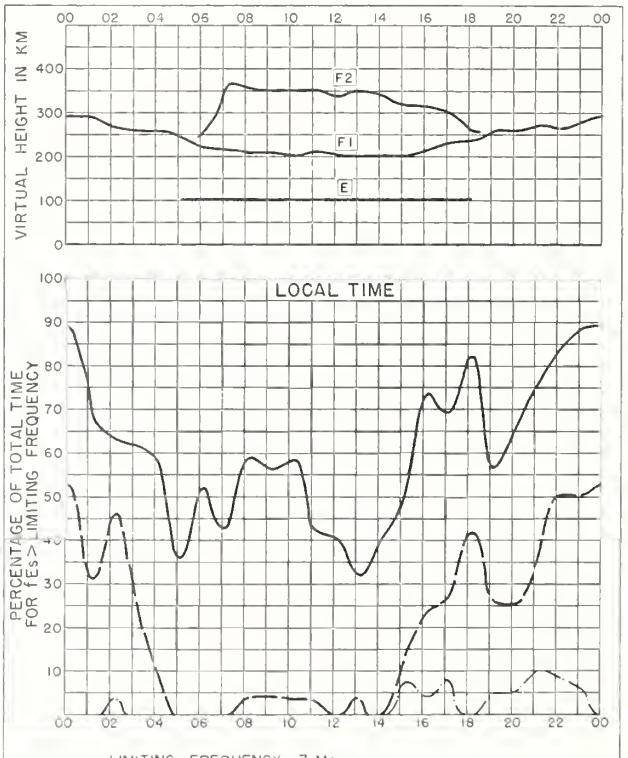



Fig. 128. MACQUARIE I. NOVEMBER 1951

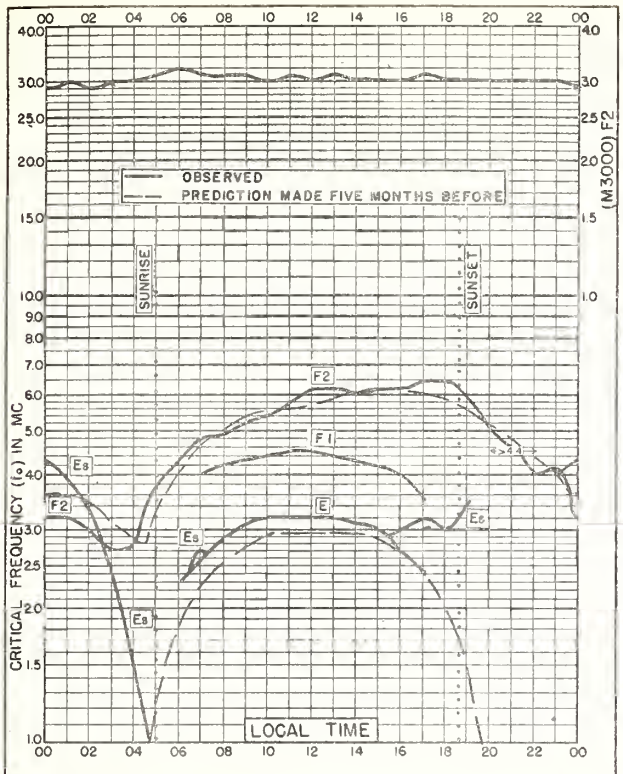



Fig.129. MACQUARIE I.
54.5°S, 159.0°E OCTOBER 1951

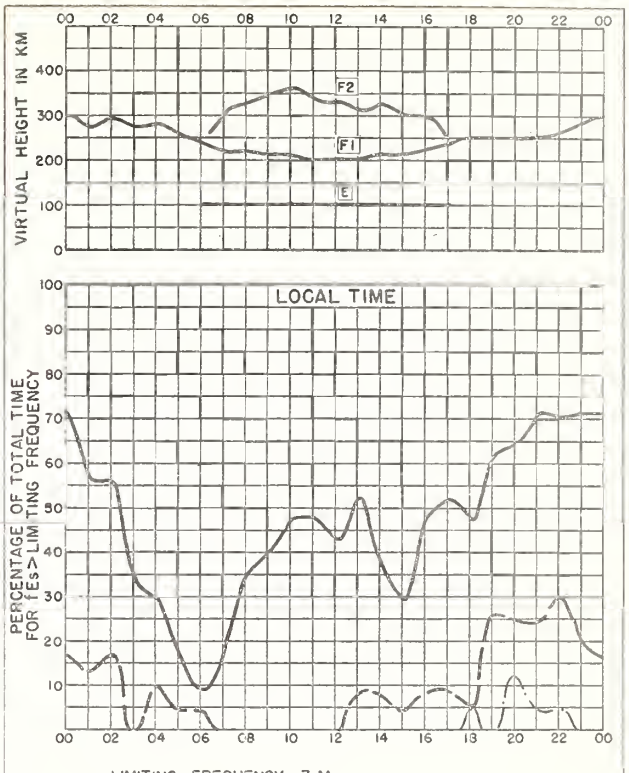



Fig.130. MACQUARIE I. OCTOBER 1951

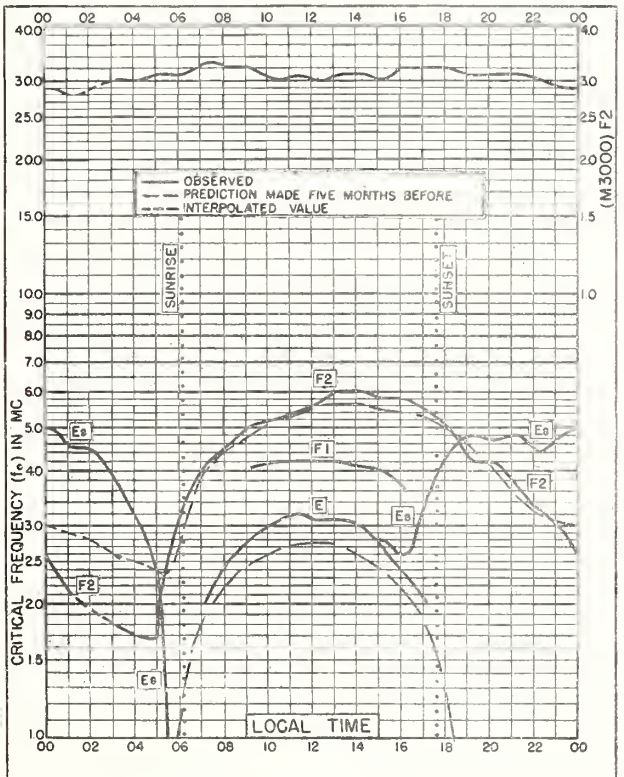



Fig.131. MACQUARIE I.
54.5° S, 159.0°E SEPTEMBER 1951

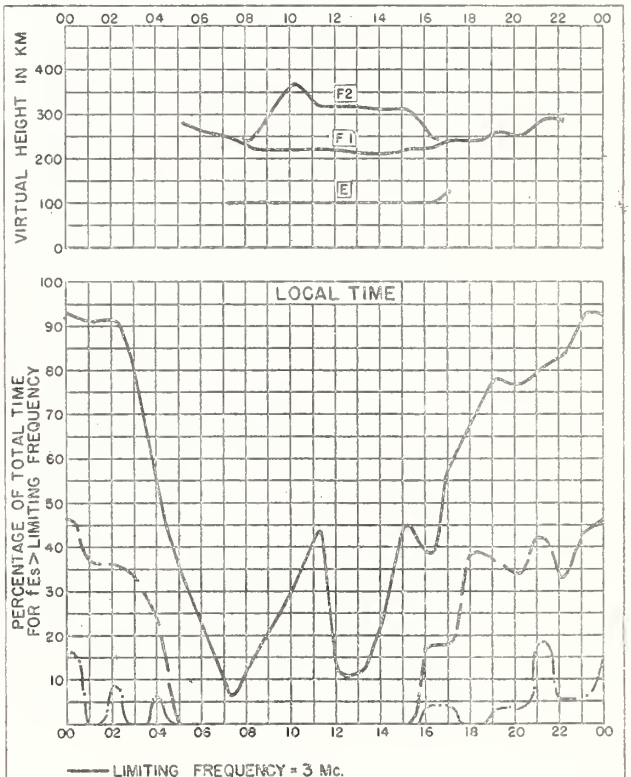



Fig.132. MACQUARIE I. SEPTEMBER 1951

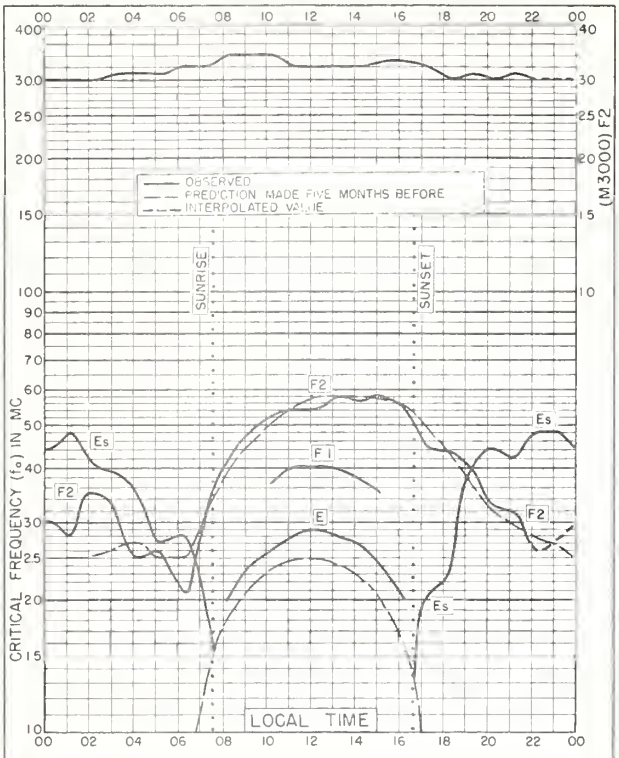



Fig. 133. MACQUARIE I.
54.5°S, 159.0°E AUGUST 1951

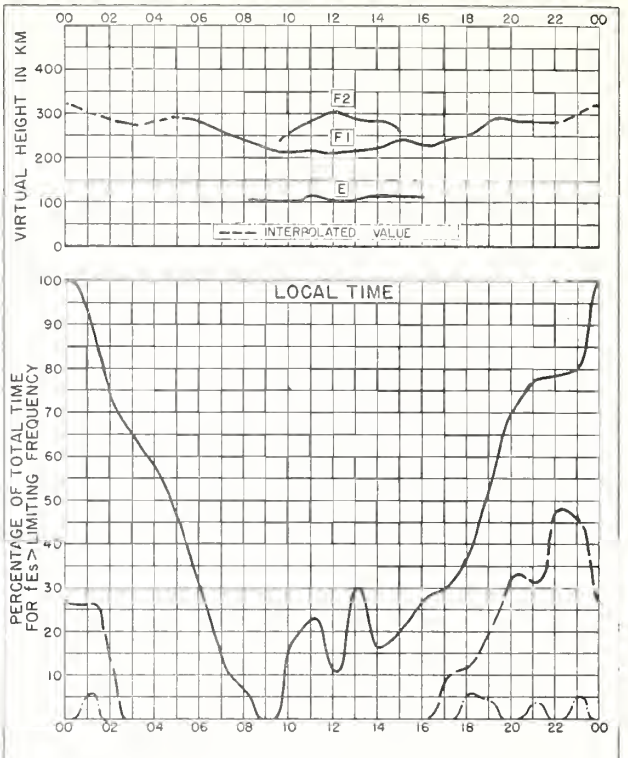



Fig. 134. MACQUARIE I. AUGUST 1951

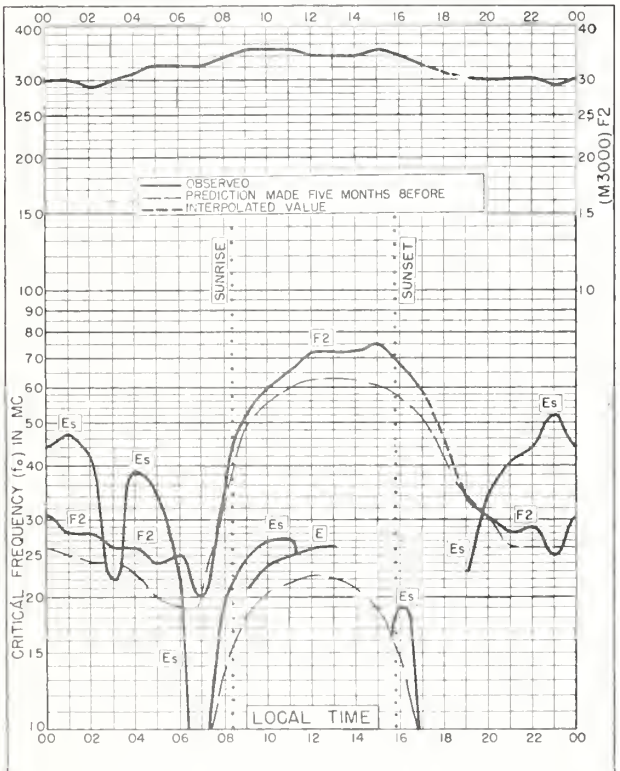



Fig 135. MACQUARIE I.
54.5°S, 159.0°E JULY 1951

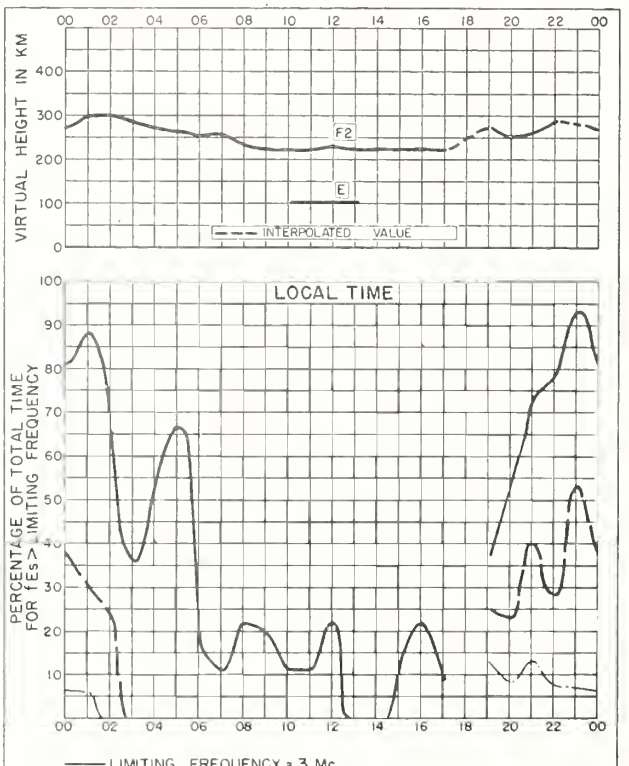



Fig 136. MACQUARIE I. JULY 1951

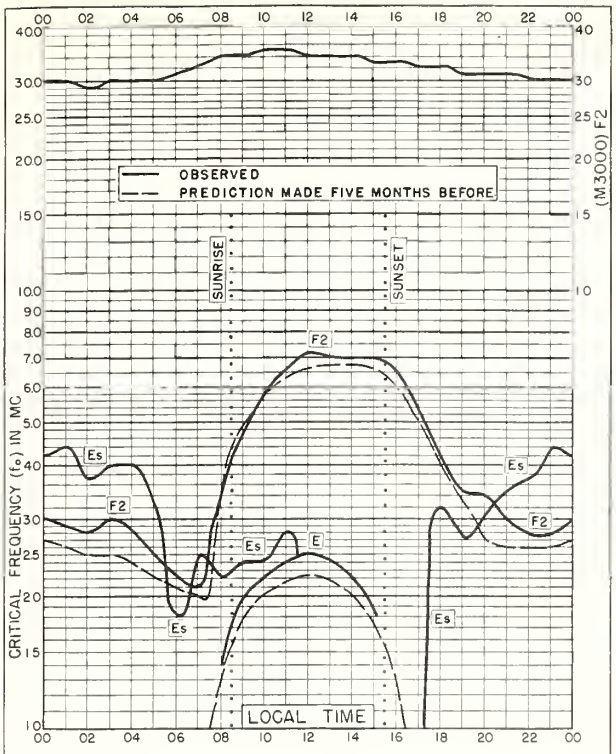



Fig. 137. MACQUARIE I.
54.5°S, 159.0°E JUNE 1951

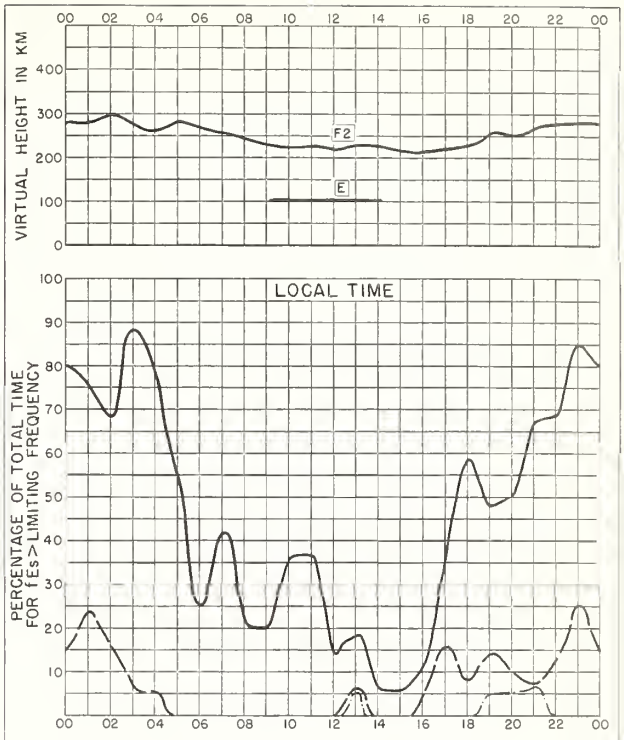



Fig. 138. MACQUARIE I. JUNE 1951

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# CRPL and IRPL Reports

[A list of CRPL Section Reports is available from the Central Radio Propagation Laboratory upon request]

*Daily:*

Radio disturbance forecasts, every half hour from broadcast station WWV of the National Bureau of Standards. Telephoned and telegraphed reports of ionospheric, solar, geomagnetic, and radio propagation data.

*Semiweekly:*

CRPL—J. North Atlantic Radio Propagation Forecast (of days most likely to be disturbed during following month).

CRPL—Jp. North Pacific Radio Propagation Forecast (of days most likely to be disturbed during following month).

*Semimonthly:*

CRPL—Ja. Semimonthly Frequency Revision Factors For CRPL Basic Radio Propagation Prediction Reports.

*Monthly:*

CRPL—D. Basic Radio Propagation Predictions—Three months in advance. (Dept. of the Army, TB 11-499-, monthly supplements to TM 11-499; Dept. of the Navy, DNC 13 ( ) series; Dept. of the Air Force, TO 16-1B-2 series.)

CRPL—F. Ionospheric Data.

*IRPL—A. Recommended Frequency Bands for Ships and Aircraft in the Atlantic and Pacific.

*IRPL—H. Frequency Guide for Operating Personnel.

*Circulars of the National Bureau of Standards:*

NBS Circular 462. Ionospheric Radio Propagation.

NBS Circular 465. Instructions for the Use of Basic Radio Propagation Predictions.

*Reports issued in past:*

IRPL—C61. Report of the International Radio Propagation Conference, 17 April to 5 May 1944.

IRPL—G1 through G12. Correlation of D. F. Errors With Ionospheric Conditions. (G1, G3, available. Others out of print; see second footnote.)

IRPL—R. Nonscheduled reports:

- R4. Methods Used by IRPL for the Prediction of Ionosphere Characteristics and Maximum Usable Frequencies.
- R5. Criteria for Ionospheric Storminess.
- **R6. Experimental Studies of Ionospheric Propagation as Applied to the Loran System.
- R7. Second Report on Experimental Studies of Ionospheric Propagation as Applied to the Loran System.
- R9. An Automatic Instantaneous Indicator of Skip Distance and MUF.
- R10. A Proposal for the Use of Rockets for the Study of the Ionosphere.
- **R11. A Nomographic Method for both Prediction and Observation Correlation of Ionosphere Characteristics.
- **R12. Short Time Variations in Ionosphere Characteristics.
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